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MODEL

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ABSTRACT

This volume of D290-75303-2 contains shock spectra generated by activation of the separation devices between IUS stage 1 and IUS stage 2. The IUS Qualification Test Vehicle (QTV) was the test article. Test shock spectra are presented for IUS components and component design requirements.

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KEY WORDS

IUS pyroshock qualification shock spectra test data

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ACRONYMS

AFTA ASE	Aft Frame Tilt Actuator
Cl	Airborne Support Equipment
CIU	Critical Item
	Communication Interface Unit
CQT	Component Qualification Test
DOD	Department of Defense
DTV	Development Test Vehicle
EMU	Environmental Measurement Unit
ESS	Equipment Support Section
FTS	Flight Termination System
IDA	Isolation Diode Assembly
IUS	Inertial Upper Stage
PCP	Power Control Panel
PCU	Power Control Unit
PDU	Power Distribution Unit
PRLA	Payload Retention Latch Assembly
PSD	Power Spectral Density
PSU	Pyro Switching Unit
PTU POE/EQ	Power Transfer Unit
P95/50	Probability of 95% with 50% Confidence
QTV	Qualification Test Vehicle
RBA	Resistor Board Assembly
RCS	Reaction Control System
REM	Rocket Engine Module
RIMU	Redundant Inertial Measurement Unit
S&A SCU	Safe and Arm
SGLS	Signal Conditioning Unit
SIU	Space Ground Link Subsystem
SRM	Signal Interface Unit
STS	Solid Rocket Motor
T34D	Space Transportation System (Space Shuttle)
TIU	Titan Launch Vehicle Configuration Used for IUS Launch
TVC	Titan Interface Unit
WBDI	Thrust Vector Control
AADDI	Wide Band Data Interleaver

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1.0 INTRODUCTION

This document contains shock spectra obtained from accelerometer outputs measured during separation of IUS stage 1 and stage 2. The IUS qualification test vehicle (QTV) was the test article. Forty-three accelerometers were used to measure the shock environment at the base of 16 components. Measurements were recorded during 3 separation events. Comparisons of the measured shock spectra and the component design requirements are shown on the data plots. The tests were conducted in November-December 1981.

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2.0 QTV I/II STAGING SHOCK

The QTV I/II staging is accomplished with explosive nuts at 8 longeron locations. Each location contains two nuts, one on each side of the interface. The separation sequence consists of firing the aft separation nut, which is free and moves into a nut catcher, followed 40 milliseconds later by firing the fwd nut (which is fixed). A single stud between the two nuts moves aft into the nut catcher when the fwd nut is fired. Thus, ESS components experience two pyroshock events, separated by 40 milliseconds, as a result of I/II staging.

A series of three separation tests were conducted of the I/II staging event. Shock measurements were recorded on ESS equipment and at the S/C interface. Test data, results and conclusions from the QTV I/II staging test are contained in Reference 5.1.

For ease of reference in support of Volume I analyses, this document (Volume II) contains component shock environment comparisons with component qualification requirements. Table 2-A contains a list of components and the figure numbers of shock spectra comparisons with qualification test requirements.

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5.0 REFERENCES

- 5.1 22B5-005R-1, "Pyroshock Staging/Separation QTV", dated 12/2/81.
- 5.2 REM 22-16-1, "Qualification Report for Rocket Engine Module", dated September 1980, (Hamilton Standard)
- 5.3 D80-29, "Qualification Test Report for the IUS Computer Unit", dated May 1980, (Delco)
- 5.4 "Inertial Upper Stage Safe/Arm Device Qualification Test Report P/N 50-9758", dated 30 September 1980, (Unidynamics Phoenix, Inc.)

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Table 2-A

COMPARISON OF COMPONENT CQT REQUIREMENT WITH
QTV I/II STAGING PYROSHOCK ENVIRONMENT

				FIGURE	NUMBER	·		
COMPONENT	ACC. NO.	TES	Т 1	TES	T 2	TES	TEST 3	
		PULSE #1	PULSE #2	PULSE #1	PULSE #2	PULSE #1	PULSE #2	
RIMU	3A R T	2-1 2-3 2-5	2-2 2-4 2-6	2-7 2-9 2-11	- 2-8 2-10 2-12	2-13 2-15 2-17	2-14 2-16 2-18	
REM	4A R T	2-19 2-21 2-23	2-20 2-22 2-24	2-25 2-27 2-29	2-26 2-28 2-30	2-31 2-33 2-35	2-32 2-34 2-36	
Computer	5A 71R	2-37 2-39	2-38 2-40	2-41 2-43	2-42 2-44	2-45 2-47	2-46 2-48	
ESS S&A	8A R	2-49 2-51	2-50 2-52	2-53 2-55	2-54 2-56	2-57 2-59	2-58 2-60	
Transponder "B"	10A R T			2-61 2-63 2-65	2-62 2-64 2-66	2-67 2-69 2-71	2-68 2-70 2-72	
SCU	11A R T	2-73 2-75 2-77	2-74 2-76 2-78	2-79 2-81 2-83	2-80 2-82 2-84	2-85 2-87 2-89	2-86 2-88 2-90	
PDU @ 279°	12A R T	2-91 2-93 2-95	2-92 2-94 2-96					
SIU	15A R T			2-97 2-99 2-101	2-98 2-100 2-102	2-103 2-105 2-107	2-104 2-106 2-108	
PTU	17A R T	2-109 2-111 2-113	2-110 2-112 2-114	2-115 2-117 2-119	2-116 2-118 2-120	2-121 2-123	2-122 2-124	
Decryptor "A"	18A R T			2-125 2-127 2-129	2-126 2-128 2-130	2-131 2-133 2-135	2-132 2-134 2-136	

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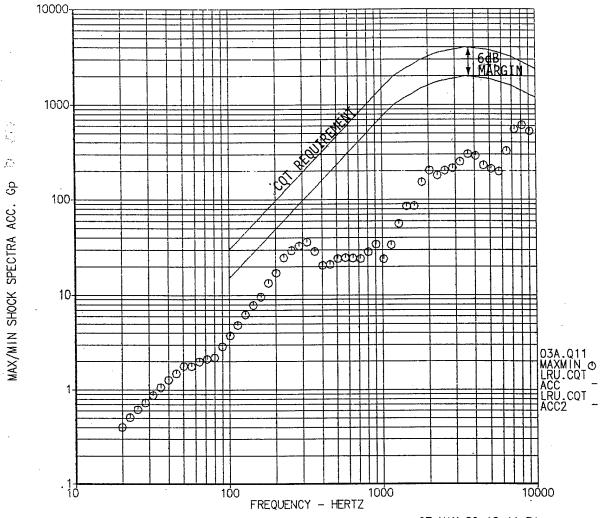
Table 2-A (Cont.)

COMPARISON OF COMPONENT CQT REQUIREMENT WITH

QTV I/II STAGING PYROSHOCK ENVIRONMENT

			,	FIGURE	NUMBER		
COMPUTER	ACC. NO.	TEST 1		TES	T 2	TEST 3	
		PULSE #1	PULSE #2	PULSE #1	PULSE #2	PULSE #1	PULSE #2
PSU	19A R T	2-137 2-139 2-141	2-138 2-140 2-142	2-143 2-145 2-147	2-144 2-146 2-148	2-149 2-151 2-153	2-150 . 2-152 2-154
Pwr Amp "B"	40A R T	2-155 2-157 2-159	2-156 2-158 2-160	2-161 2-163 2-165	2-162 2-164 2-166	2-167 2-169 2-171	2-168 2-170 2-172
RF Switch	44A R T	2-173 2-175 2-177	2-174 2-176 2-178	2-179 2-181 2-183	2-180 2-182 2-184	2-185 2-187 2-189	2-186 2-188 2-190
PDU @ 291°	55A R	2-191 2-193	2-192 2-194				
DC/DC Converter	72A R	2-195 2-197	2-196 2-198	2-199 2 - 201	2-200 2-202	2-203 2-205	2-204 2-206
Pwr Amp "A"	73A R	2-207 2-209	2-208 2-210	2-211	2-212	2-213 2-215	2-214 2-216

FIGURE 2-1 SHOCK SPECTRA (Q = 10) HO3AQ QTV PYROSHOCK TEST 1 PULSE 1

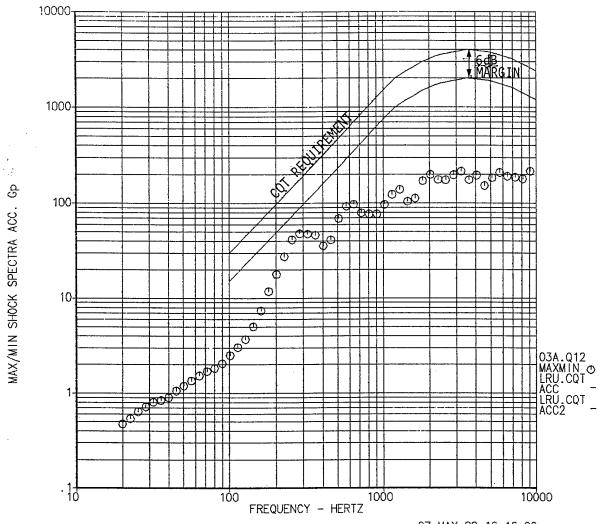


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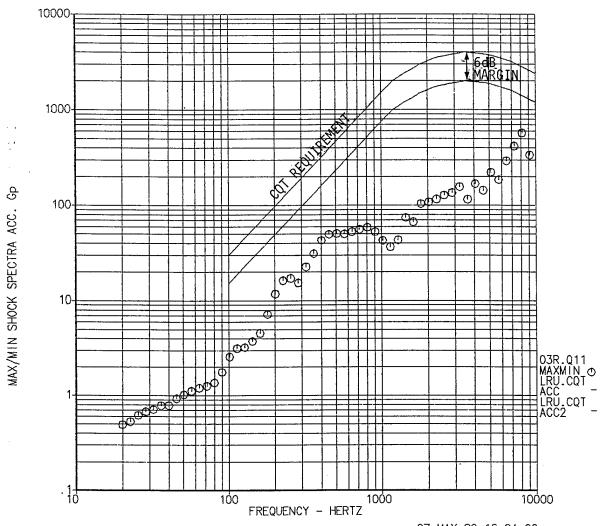
FIGURE 2-2 SHOCK SPECTRA (Q = .10) HO3AQ QTV PYROSHOCK TEST 1 PULSE 2



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FIGURE 2-3
SHOCK SPECTRA (Q = 10)
HO3RQ QTV PYROSHOCK TEST 1 PULSE 1

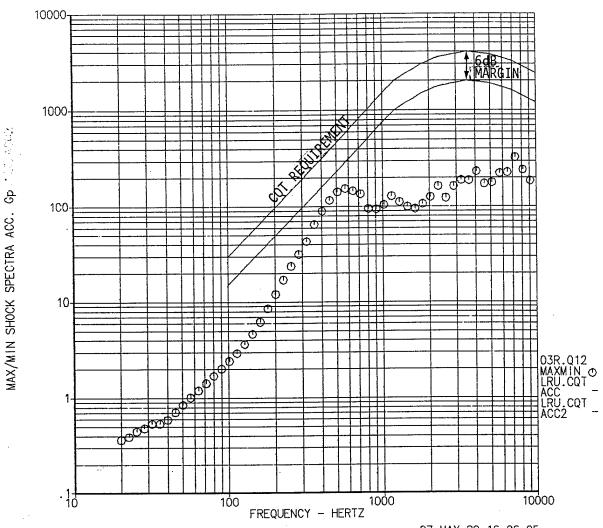


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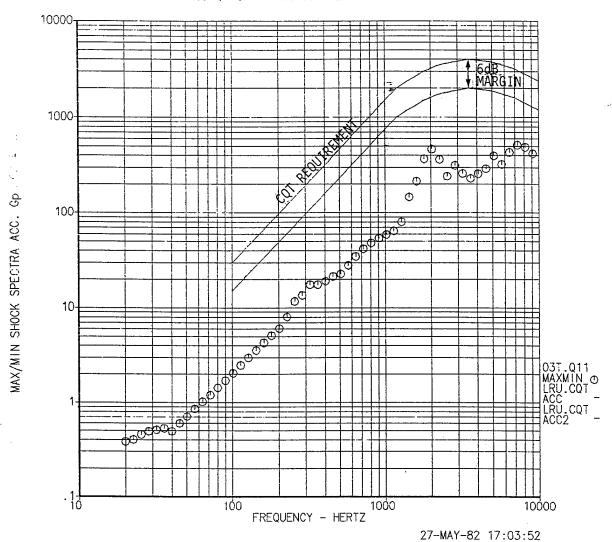
FIGURE 2-4
SHOCK SPECTRA (Q = 10)
HO3RQ QTV PYROSHOCK TEST 1 PULSE 2



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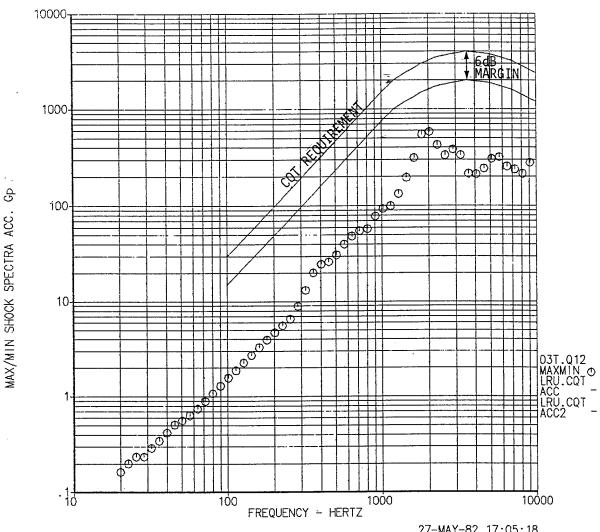
FIGURE 2-5
SHOCK SPECTRA (Q = 10)
HO3TQ QTV PYROSHOCK TEST 1 PULSE 1



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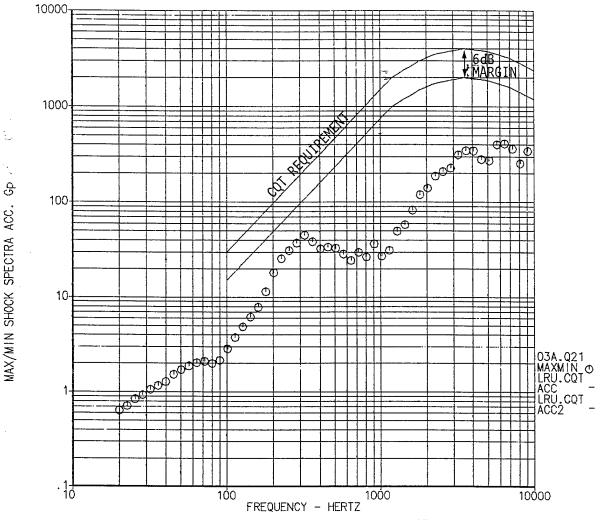
FIGURE 2-6 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 1 PULSE 2



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FIGURE 2-7 SHOCK SPECTRA (Q = 10) HO3AQ QTV PYROSHOCK TEST 2 PULSE 1

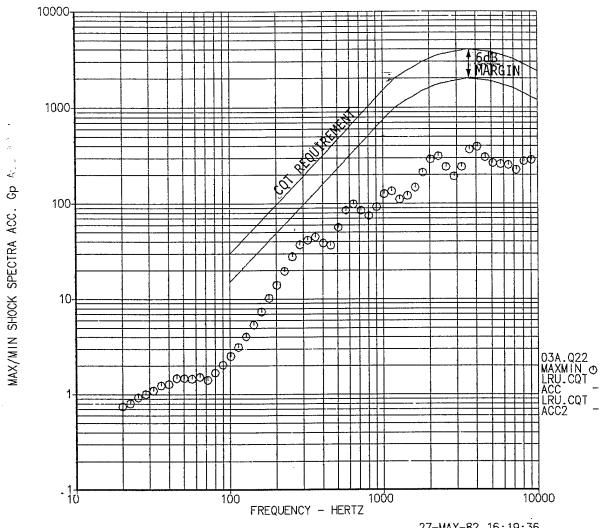


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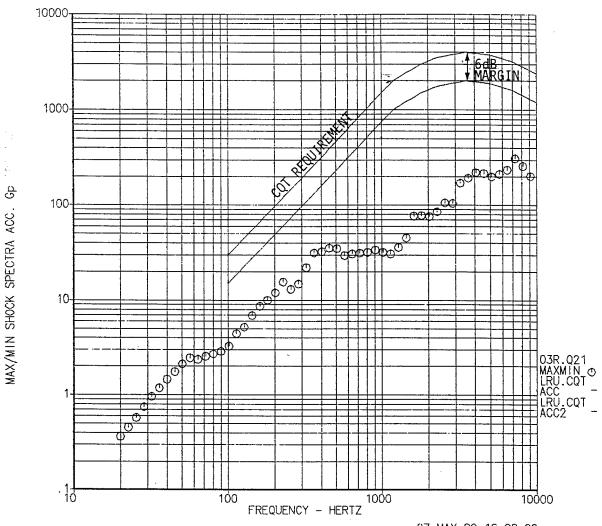
FIGURE 2-8
SHOCK SPECTRA (Q = 10)
QTV PYROSHOCK TEST 2 PULSE 2



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FIGURE 2-9
SHOCK SPECTRA (Q = 10)
HO3RQ QTV PYROSHOCK TEST 2 PULSE 1

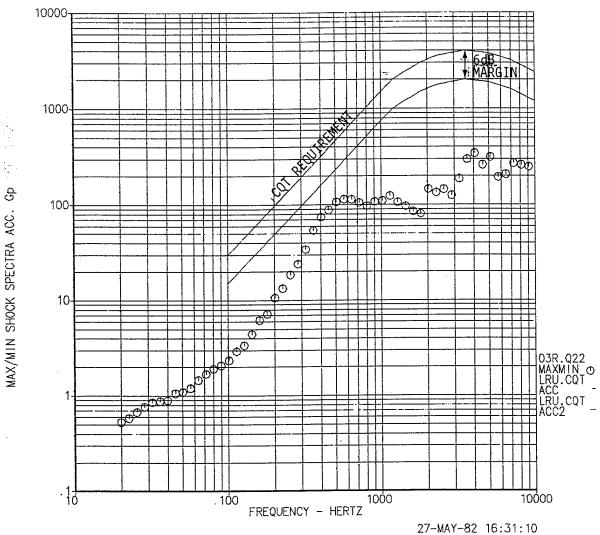


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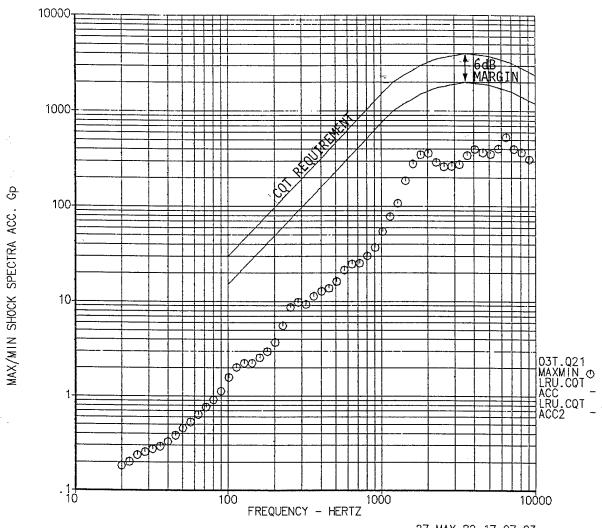
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FIGURE 2-10 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 2 PULSE 2



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APPD.				THE BOEING COMPANY	PAGE 18

FIGURE 2-11
SHOCK SPECTRA (Q = 10)
HO3TQ QTV PYROSHOCK TEST 2 PULSE 1

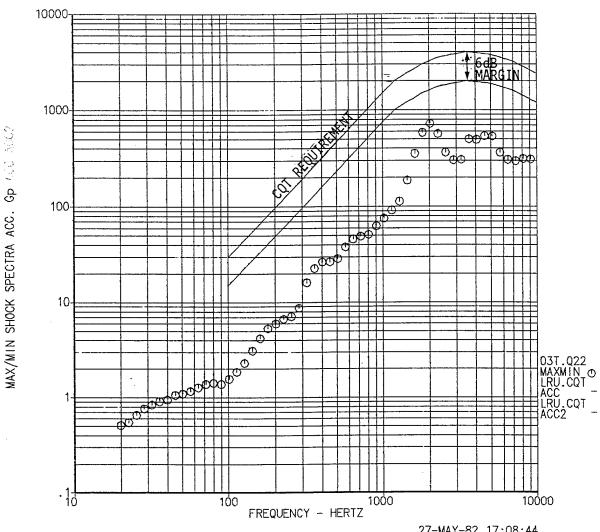


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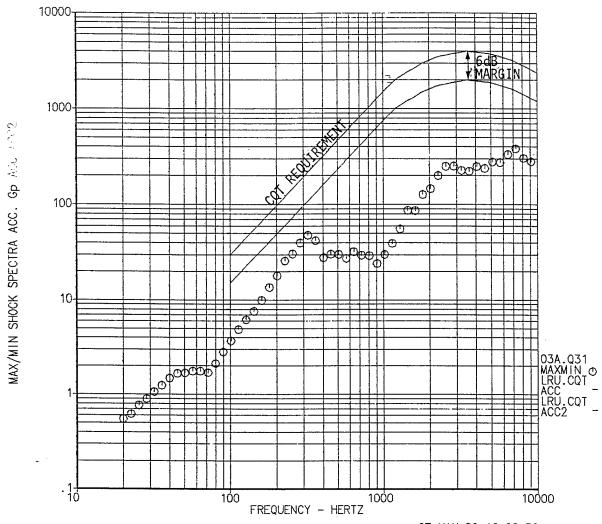
FIGURE 2-12 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 2 PULSE 2



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FIGURE 2-13
SHOCK SPECTRA (Q = 10)
HO3AQ QTV PYROSHOCK TEST 3 PULSE 1

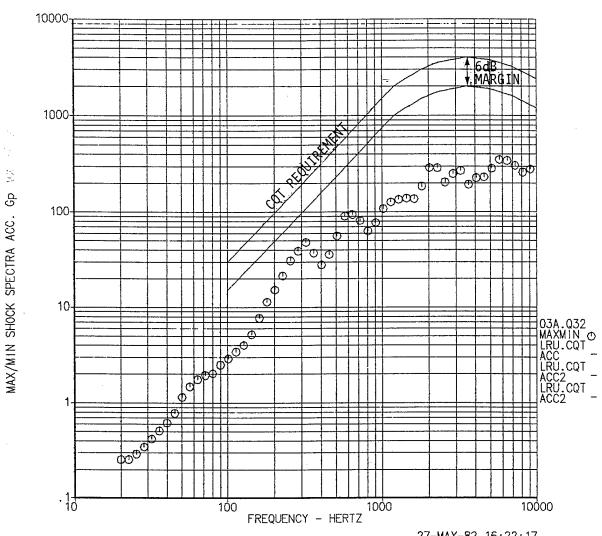


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FIGURE 2-14
SHOCK SPECTRA (Q = 10)
HO3AQ QTV PYROSHOCK TEST 3 PULSE 2



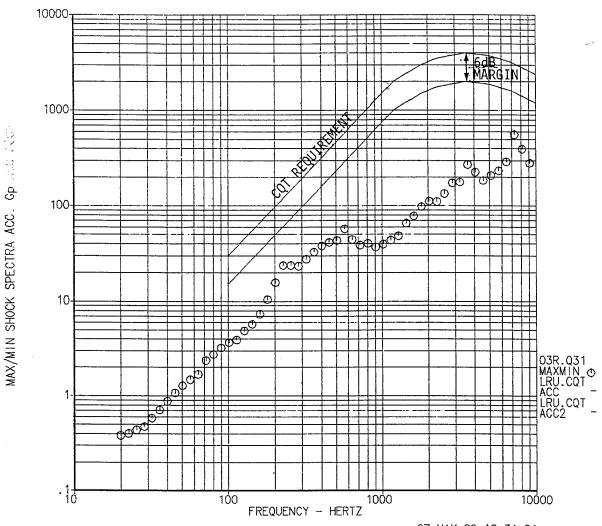
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FIGURE 2-15

SHOCK SPECTRA (Q = 10)
HO3RQ QTV PYROSHOCK TEST 3 PULSE 1

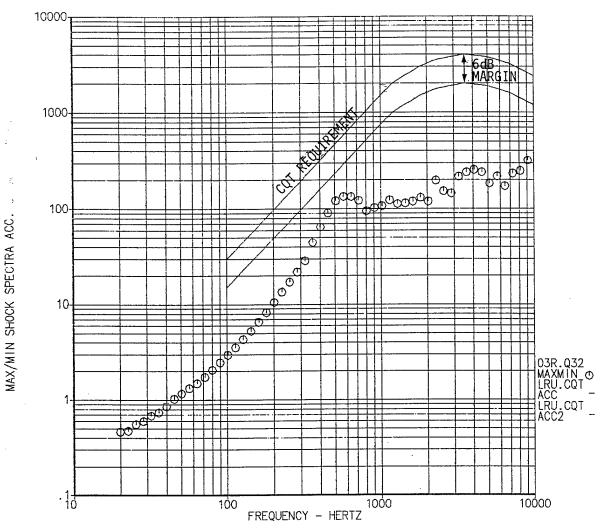


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FIGURE 2-16
SHOCK SPECTRA (Q = 10)
HO3RQ QTV PYROSHOCK TEST 3 PULSE 2

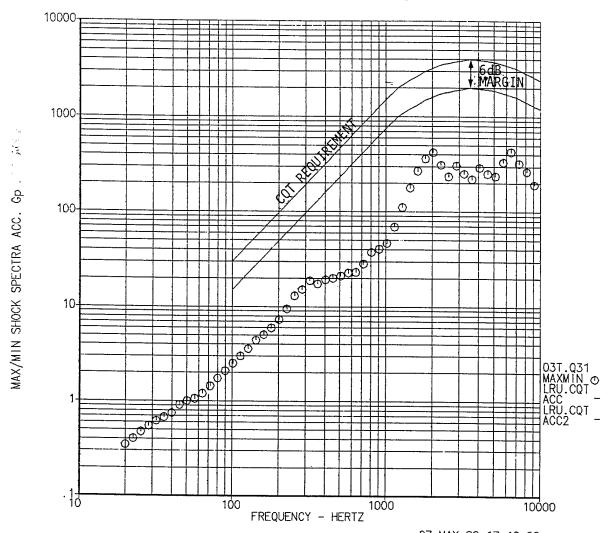


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FIGURE 2-17 SHOCK SPECTRA (Q = 10) HO3TQ QTV PYROSHOCK TEST 3 PULSE 1

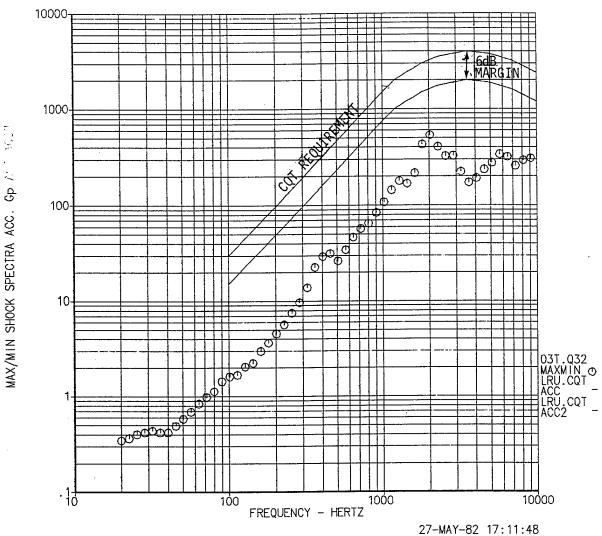


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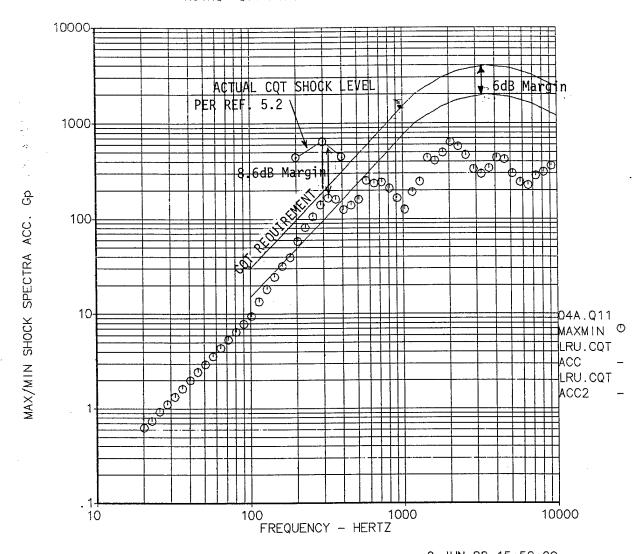
FIGURE 2-18 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 3 PULSE 2



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FIGURE 2-19
SHOCK SPECTRA (Q = 10)
HO4AQ QTV PYROSHOCK TEST 1 PULSE 1

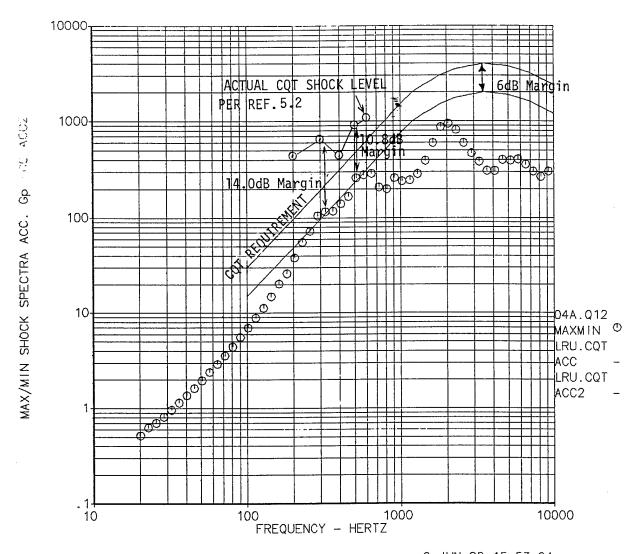


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FIGURE 2-20 SHOCK SPECTRA (Q = 10) HO4AQ QTV PYROSHOCK TEST 1 PULSE 2

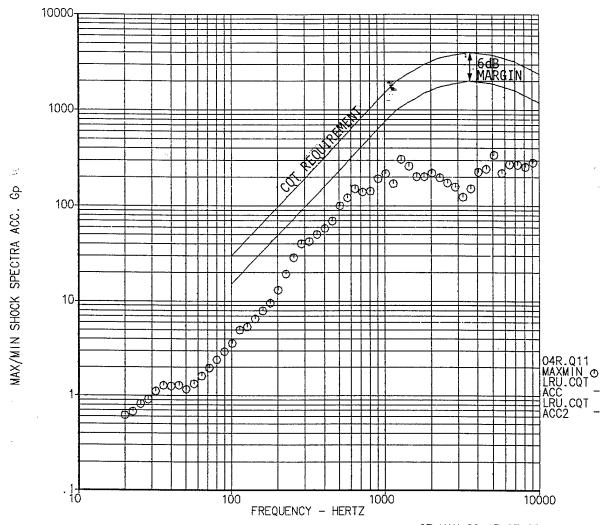


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CHECK		į		environment with component	7100 171
APPD.		l		environment with component Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 28
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FIGURE 2-27 SHOCK SPECTRA (Q = 10) HO4R QTV PYROSHOCK TEST 1 PULSE 1

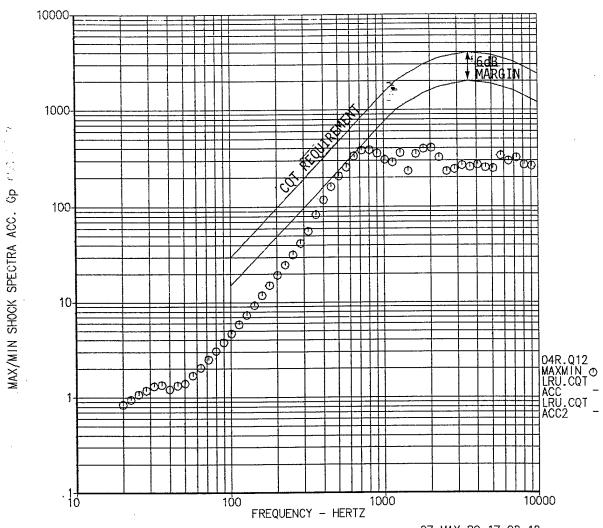


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APPD.				THE BOEING COMPANY	PAGE 29

FIGURE 2-22 SHOCK SPECTRA (Q = .10) HO4R QTV PYROSHOCK TEST 1 PULSE 2

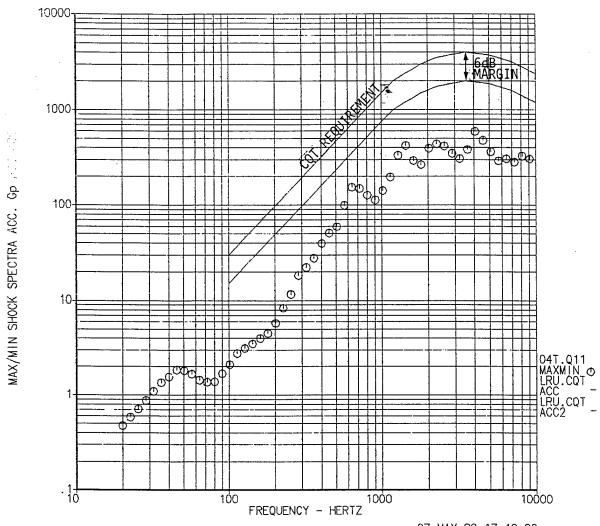


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APPD.		ļ		Test Requirement	DIAT 20
APPD.				THE BOEING COMPANY	PAGE 30
4 .	1 1	1	1	THE DOLLARO COMMITMENT	

FIGURE 2-23
SHOCK SPECTRA (Q = 10)
HO41 QTV PYROSHOCK TEST 1 PULSE 1

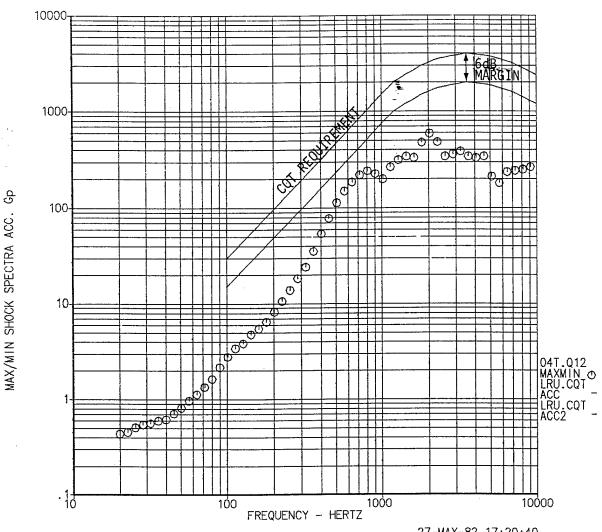


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APPD.				Test Requirement	
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FIGURE 2-24 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 1 PULSE 2

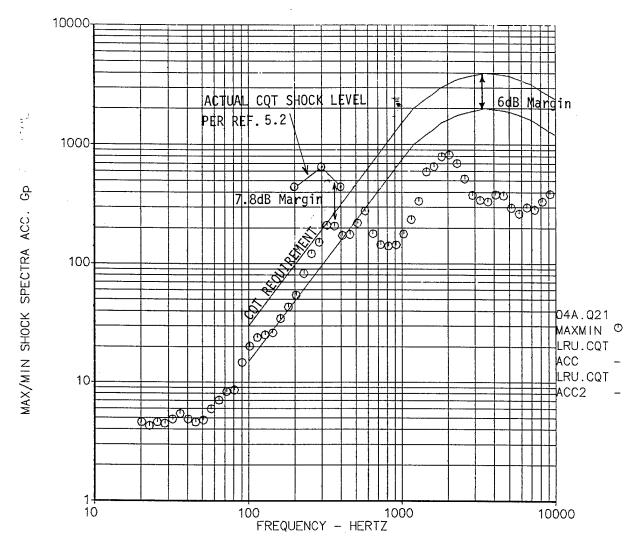


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CHECK		ļ		environment with component	
APPD.				Test Requirement	
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FIGURE 2-25 SHOCK SPECTRA (Q = 10) HO4A QTV PYROSHOCK TEST 2 PULSE 1

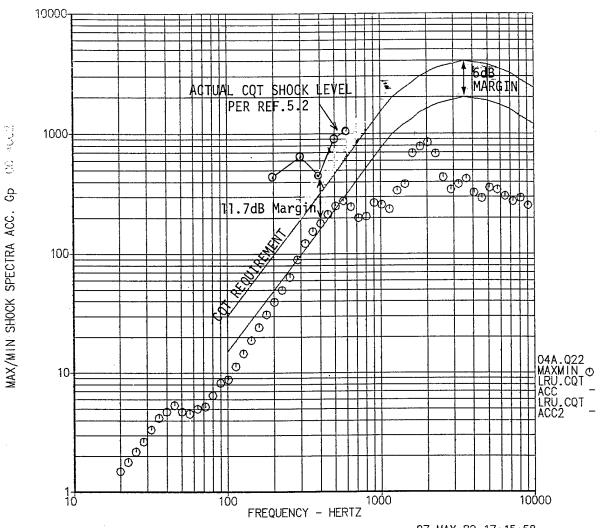


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CHECK				environment with component Test Requirement	ACC 4A
APPD.				Test Requirement	
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FIGURE 2-26 SHOCK SPECTRA (Q = 10) HO4A QTV PYROSHOCK TEST 2 PULSE 2

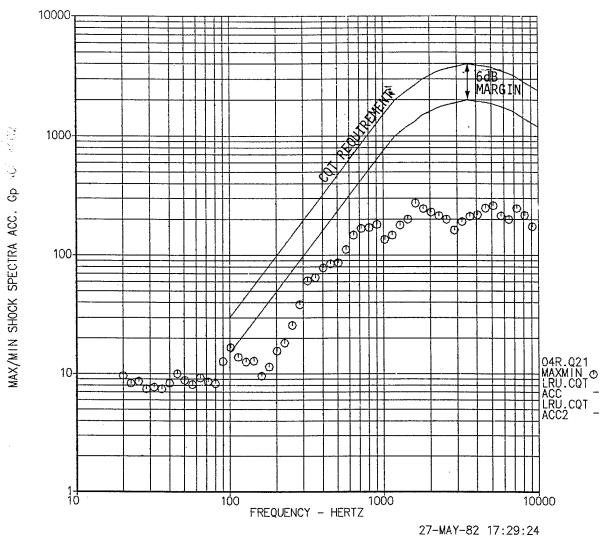


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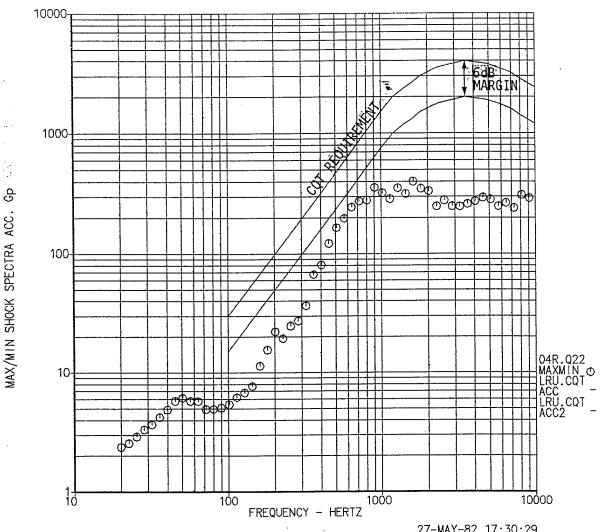
FIGURE 2-27 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 2 PULSE 1



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APPD.				THE DOEING COMPANY	PAGE 35
				THE BOLING COMPANY	

FIGURE 2-28 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 2 PULSE 2

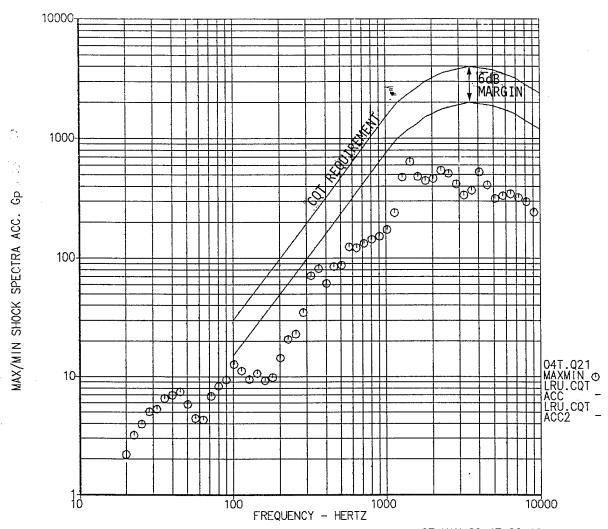


27-MAY-82 17:30:29

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APPD.				Test Requirement	
APPD.				THE ROFING COMPANY PAGE 36	
				THE DOLLING COMEANT IS	

FIGURE 2-29 SHOCK SPECTRA (Q = 10) HO4T QTV PYROSHOCK TEST 2 PULSE 1

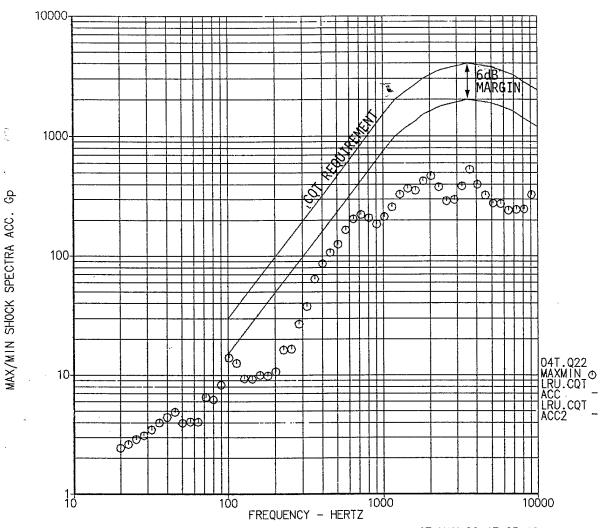


27-MAY-82 17:22:42

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 4T
CHECK				environment with component	ACC 41
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 37
				THE DUETING CUMPANT	

FIGURE 2-30 SHOCK SPECTRA (Q = 10) HO4T QTV PYROSHOCK TEST 2 PULSE 2

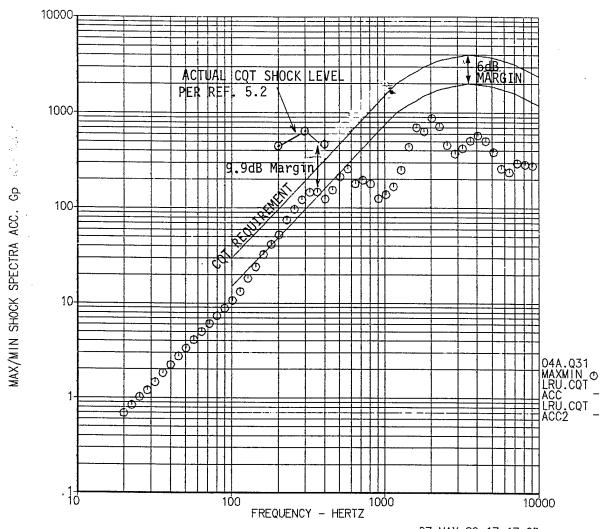


27-MAY-82 17:23:46

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 4T
CHECK	1 1			environment with component	
APPD.	+			Test Requirement	
APPD.				THE DOELNO COMPANY	PAGE 38
				THE BOFING COMPANY	÷

FIGURE 2-31 SHOCK SPECTRA (Q = 10) HO4A QTV PYROSHOCK TEST 3 PULSE 1

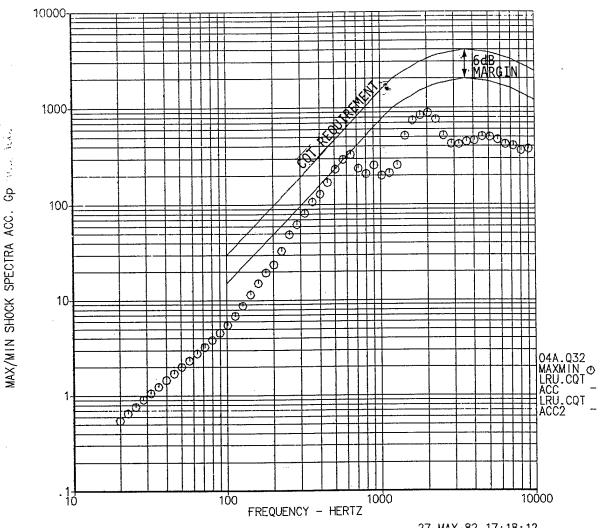


27-MAY-82 17:17:05

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 4A
CHECK				environment with component	ACC 4A
APPD.				Test Requirement	1
APPD.				THE BOFING COMPANY	PAGE 39
				I THE DUETING CUMPAINT	1

FIGURE 2-32 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 3 PULSE 2

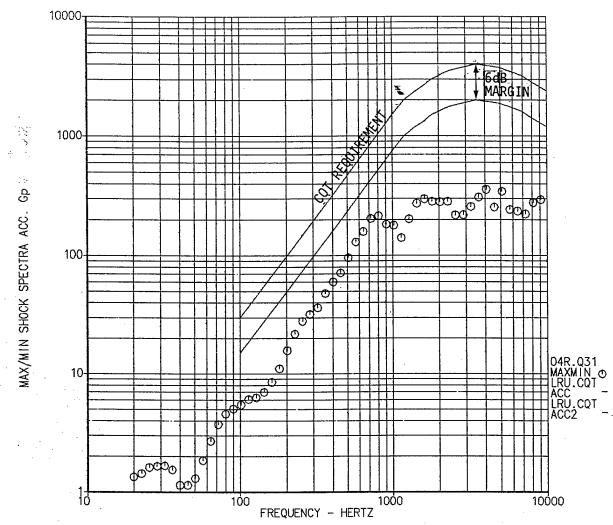


27-MAY-82 17:18:12

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 4A
CHECK APPD.			-	environment with component Test Requirement	
APPD.			·		AGE 40
ll }	- 1	1	l	THE DOCTION COMMENTS	

FIGURE 2-33
SHOCK SPECTRA (Q = 10)
HO4R QTV PYROSHOCK TEST 3 PULSE 1

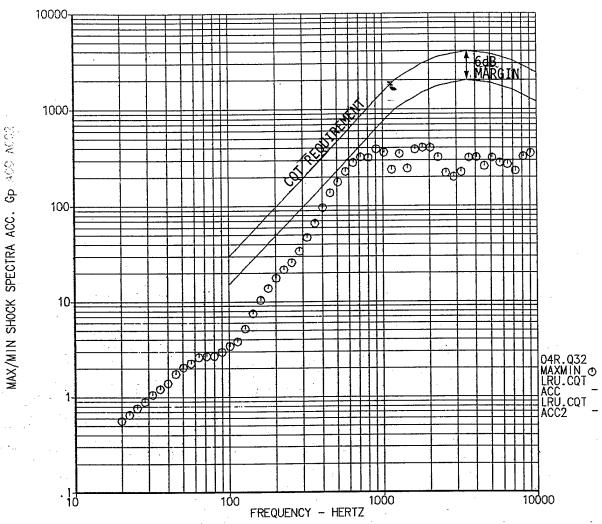


27-MAY-82 17:31:28

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 4R
CHECK			L	environment with component	7.00 11.
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 41
				THE DULTING COMPANY	
				D290-75303-2 Vol. II	-

FIGURE 2-34 SHOCK SPECTRA (Q = 10) HO4R QTV PYROSHOCK TEST 3 PULSE 2

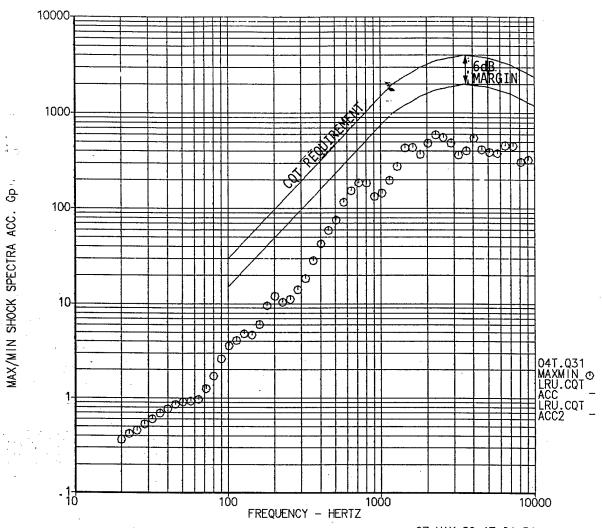


27-MAY-82 17:32:29

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CALC	27MAY82	REVISED	DATE	Comparison of component shock Acc 4R
CHECK APPD.	 	<u> </u>		environment with component Test Requirement
APPD.				THE BOEING COMPANY PAGE 42

FIGURE 2-35 SHOCK SPECTRA (Q = 10) HO4T QTV PYROSHOCK TEST 3 PULSE 1

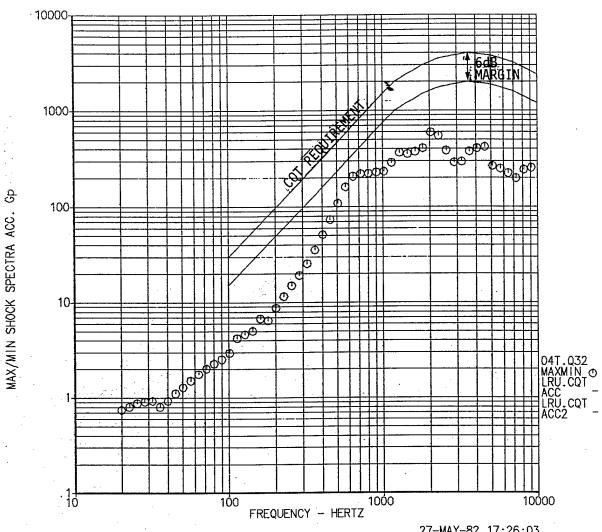


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CALC	27MAY82	REVISED	DATE	Comparison of component shock Acc 47	r
CHECK				environment with component	
APPD.		_		environment with component Test Requirement	
APPD.				THE DOCINIC COMPANIV PAGE 43	
				THE BOEING COMPANY	

FIGURE 2-36
SHOCK SPECTRA (Q = 10)
QTV PYROSHOCK TEST 3 PULSE 2

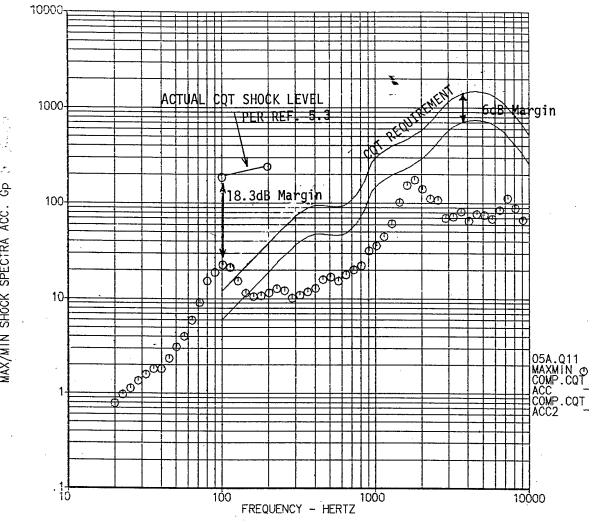


27-MAY-82 17:26:03

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CALC	27MAY82	REVISED	DATE	Comparison of component shock Acc 4T
CHECK		L		environment with component
APPD.				Test Requirement
APPD.				THE BOFING COMPANY PAGE 44
				THE DUELING COMMEANT 於網点

FIGURE 2-37
SHOCK SPECTRA (Q = 10)
HO5A QTV PYROSHOCK TEST 1 PULSE 1

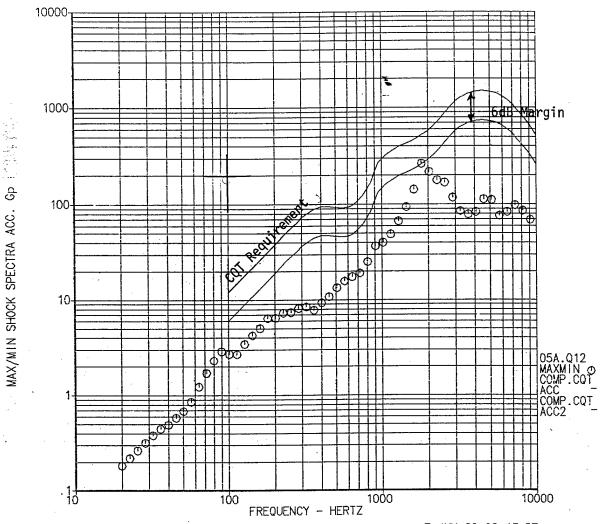


7-JUN-82 08:16:29

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CHECK				environment with component	ACC 5A
APPD.				environment with component Test Requirement	
APPD.				THE DOCING CONDAIN	PAGE 45
				THE BOFTUR, COMPANA	

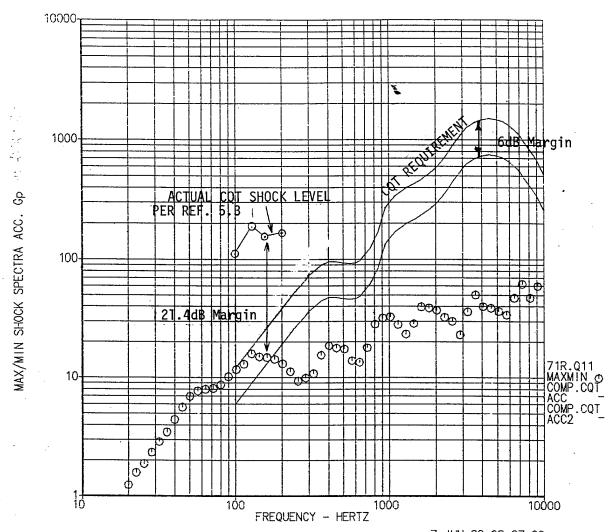
FIGURE 2-38
SHOCK SPECTRA (Q = 10)
HO5A QTV PYROSHOCK TEST 1 PULSE 2



7-JUN-82 08:17:57

CALC	7JUN82	REVISED	DATE	Comparison of component shock	Acc 5A
CHECK				environment with component	47
APPD.		1		Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 46
				LIL DOLTING COMI AINT AND	. *
				D290-75303-2 Vol. II	

FIGURE 2-39
SHOCK SPECTRA (Q = 10)
H71R QTV PYROSHOCK TEST 1 PULSE 1

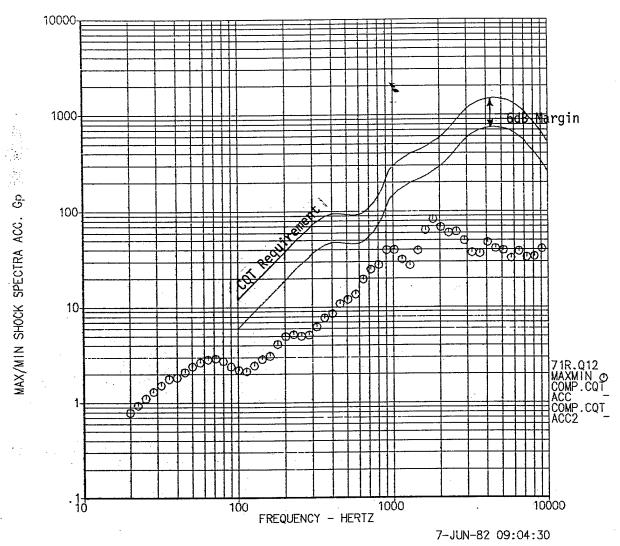


7-JUN-82 08:27:02

COMPUTER

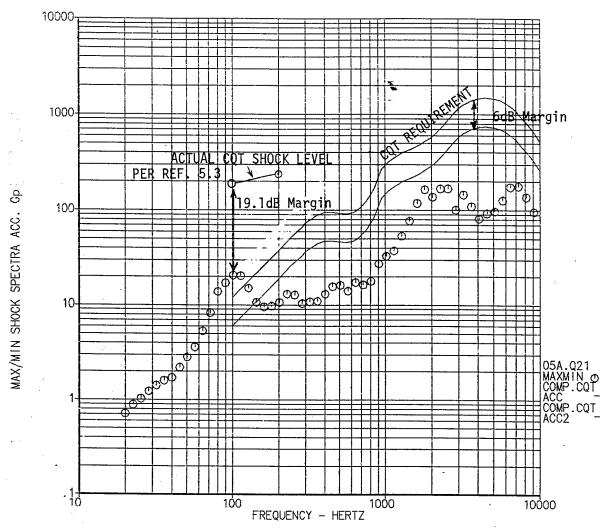
CALC	7JUN82	REVISED	DATE	Comparison of component shock	Acc 71R
CHECK		1		environment with component	ACC /IK
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	AGE 47
				THE DUETING CUMPAINT TO THE	

FIGURE 2-40 SHOCK SPECTRA (Q = 10) H71R QTV PYROSHOCK TEST 1 PULSE 2



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CHECK		1		1		100	environment with component	
APPD.							Test Requirement	
APPD.						All the second	THE BOEING COMPANY PAGE 48	-
44 2	 					4 - 44 <u>12</u> 4	LIL DOLING COMI ANTE	
•							D290=75303-2 Vol. II	

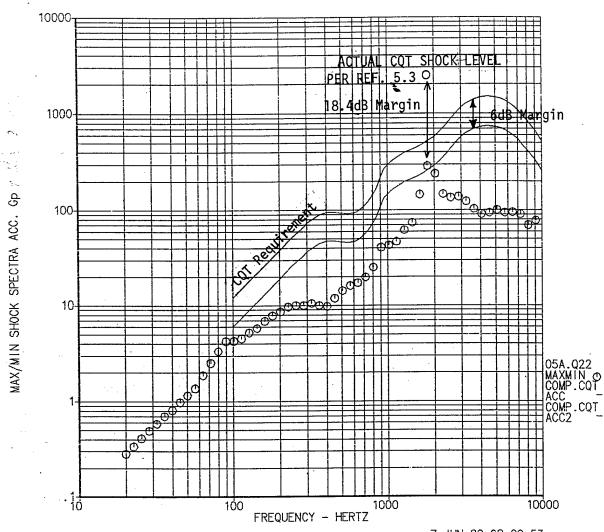
FIGURE 2-41 SHOCK SPECTRA (Q = 10) HO5A QTV PYROSHOCK TEST 2 PULSE 1



7-JUN-82 08:19:24

CALC	7JUN82	REVISED	DATE	Comparison of component shock Acc 5A
CHECK				environment with component Acc 5A
APPD.				Test Requirement
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				THE BOLING COMPANY PAGE 49
				220_75303_2 Vol. II

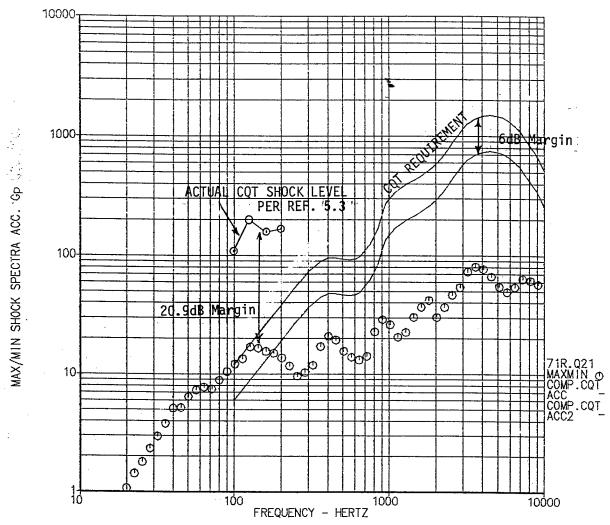
FIGURE 2-42
SHOCK SPECTRA (Q = 10)
HO5A QTV PYROSHOCK TEST 2 PULSE 2



7-JUN-82 08:20:53

CALC CHECK APPD.	7JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 5A
APPD.					PAGE 50
		·		D290-75303-2 Vol. II	

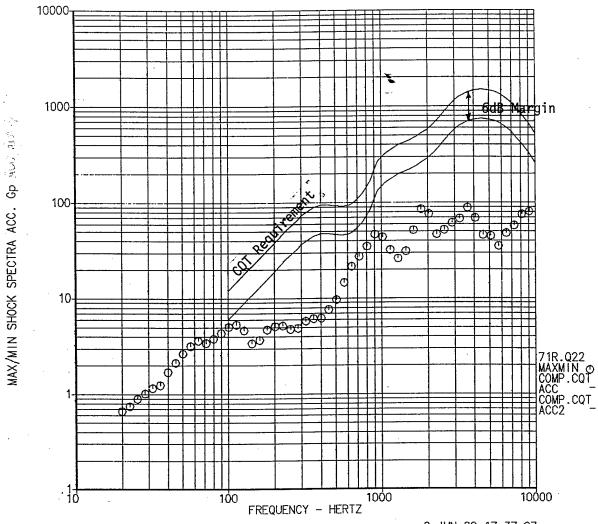
FIGURE 2-43
SHOCK SPECTRA (Q = 10)
H71R QTV PYROSHOCK TEST 2 PULSE 1



7-JUN-82 09:07:54

CALC CHECK	7JUN82	REVISED	DATE	Comparison of component shock	Acc 71R
APPD.	<u>.</u>			environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 51
				D290-75303-2 Vol. II	

FIGURE 2-44
SHOCK SPECTRA (Q = 10)
H71R QTV PYROSHOCK TEST 2 PULSE 2

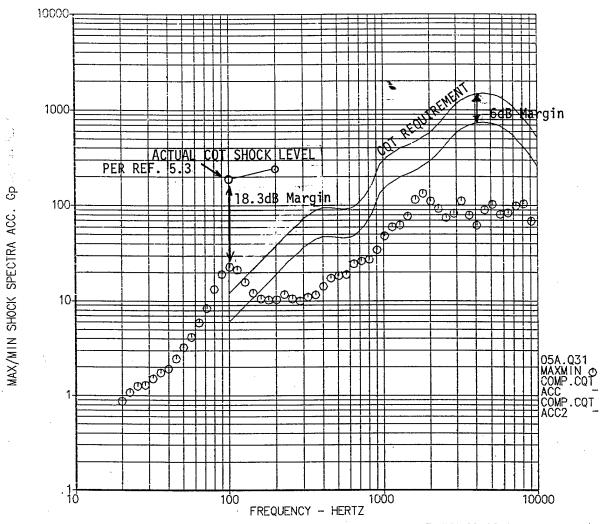


8-JUN-82 17:37:27

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CALC	8JUN82	REVISED	DATE	Comparison of component shock Acc 71R
CHECK			<u> </u>	environment with component
APPD.				Test Requirement
APPD.				THE BOEING COMPANY PAGE 52
				THE DOLLING COMMANT

FIGURE 2-45
SHOCK SPECTRA (Q = 10)
HOSA QTV PYROSHOCK TEST 3 PULSE 1

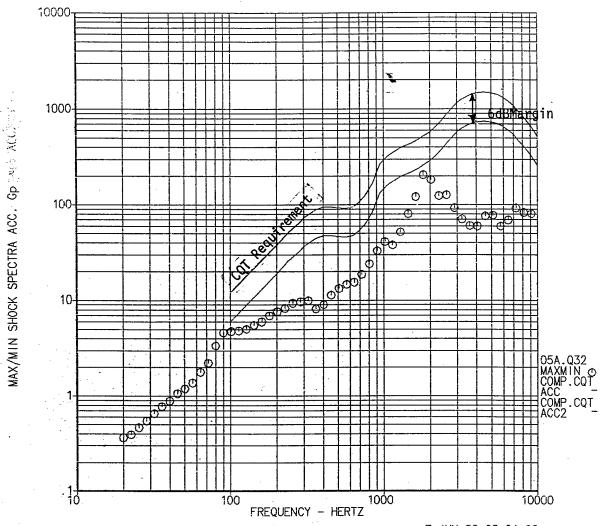


7-JUN-82 08:22:21

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CALC	7JUN82	REVISED	DATE	Comparison of component shock	Acc 5A
CHECK				environment with component lest Requirement	7,00 0/1
APPD.				Jest Requirement	
APPD.				THE BOFING COMPANY	AGE 53
į				THE DUELING COMPAINT SATISFA	in to a

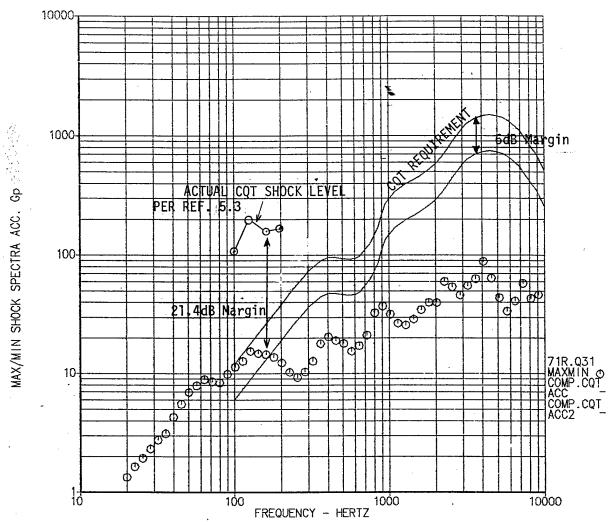
FIGURE 2-46
SHOCK SPECTRA (Q = 10)
HO5A QTV PYROSHOCK TEST 3 PULSE 2



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CALC	7JUN82	REVISED	DATE	Comparison of component shock Acc 5A	jį
CHECK				environment with component	$-\parallel$
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY PAGE 54	
				MELLHEE BUELING CUMPANT AND	
	 			D000 -7E202: 0 Value II	

FIGURE 2-47
SHOCK SPECTRA (Q = 10)
H71R QTV PYROSHOCK TEST 3 PULSE 1

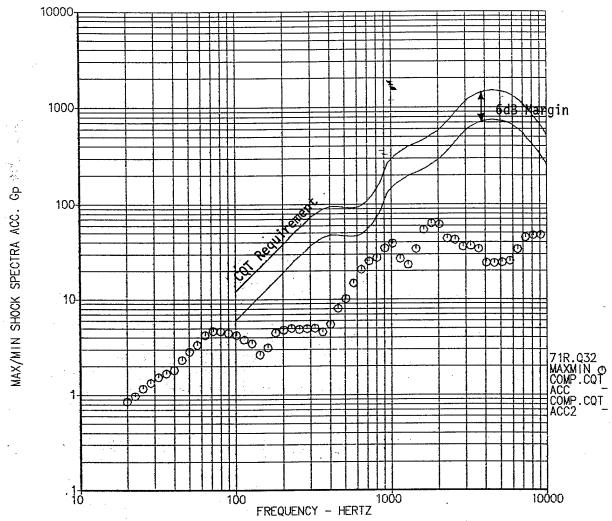


7-JUN-82 09:15:19

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CHECK				environment with component Test Requirement
APPD.				Test Requirement
APPD.				THE BOFING COMPANY PAGE 55
				THE DUETNO COMPANT AND A

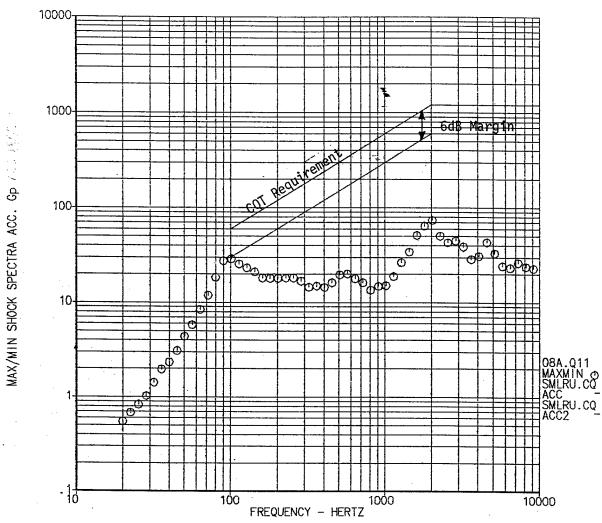
FIGURE 2-48
SHOCK SPECTRA (Q = 10)
H71R QTV PYROSHOCK TEST 3 PULSE 2



7-JUN-82 09:18:25

CALC	7JUN82	REVISED	DATE	Comparison of component shock	Acc 71R
CHECK				environment with component	
APPD.				Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 56
	 •	-		D290-75303-2 Vol. II	

FIGURE 2-49
SHOCK SPECTRA (Q = 10)
HO8A QTV PYROSHOCK TEST 1 PULSE 1

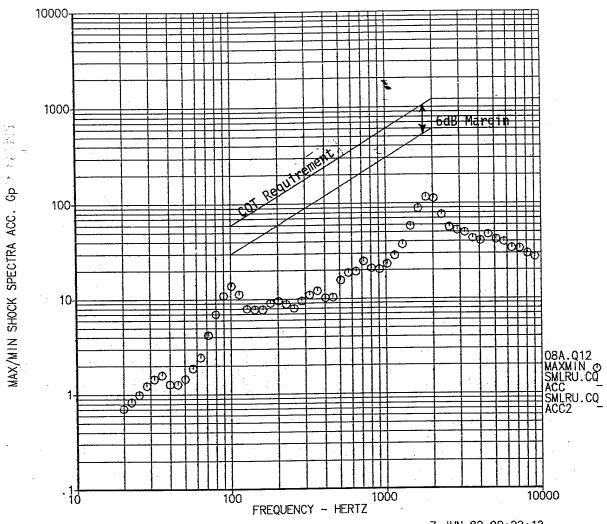


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CHECK				environment with component	Acc 8A
APPD.				Test Requirement	
APPD.					PAGE 57
				INE BUEING CUMPANT	

FIGURE 2-50 SHOCK SPECTRA (Q = 10) HO8A QTV PYROSHOCK TEST 1 PULSE 2

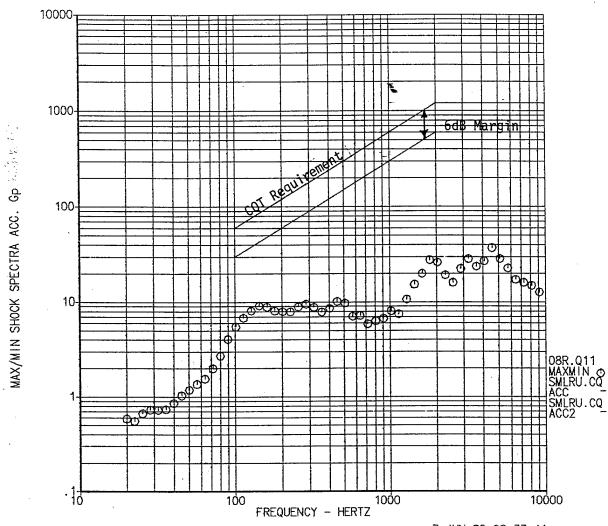


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CHECK		ļ		environment with component Test Requirement Test Requirement
APPD.				THE BOEING COMPANY PAGE 58
				THE DULTING COMILAINT SEE S

FIGURE 2-51 SHOCK SPECTRA (Q = 10) HOBR QTV PYROSHOCK TEST 1 PULSE 1

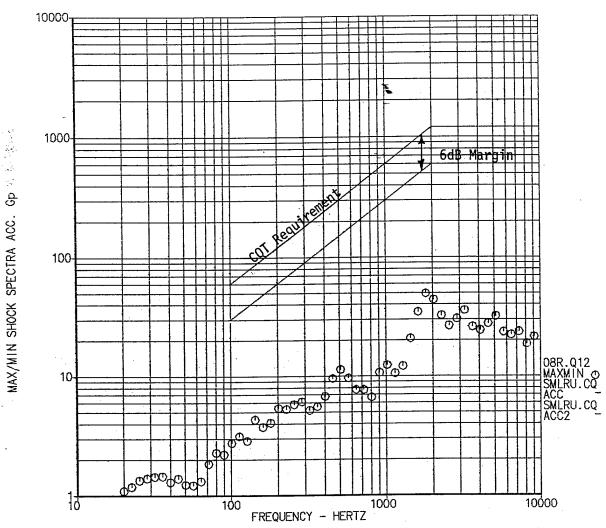


7-JUN-82 09:33:41

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CALC	7JUN82	REVISED	DATE	Comparison of component shock	Acc 8R
CHECK				environment with component	
APPD.				Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 59
				THE BULTING COMPAINT	¥.

FIGURE 2-52
SHOCK SPECTRA (Q = 10)
HOBR QTV PYROSHOCK TEST 1 PULSE 2

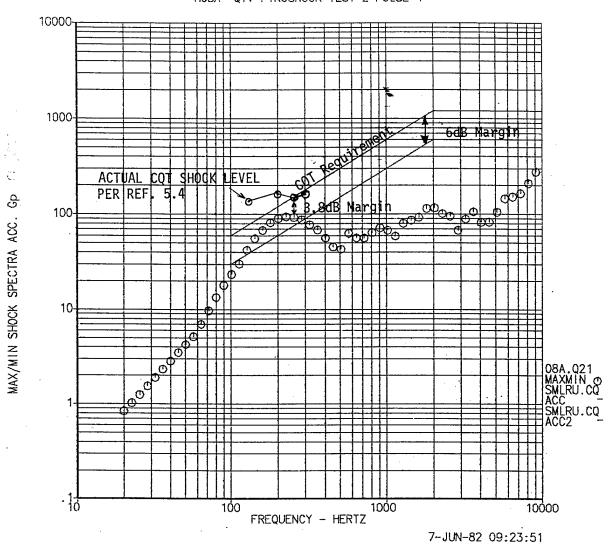


7-JUN-82 09:36:58

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CALC	7JUN82	REVISED	DATE	Comparison of component shock Acc 8R
CHECK APPD.	 			environment with component Test Requirement
APPD.			·	THE BOEING COMPANY PAGE 60
				THE DOLLING COMMENTS

FIGURE 2-53
SHOCK SPECTRA (Q = 10)
HOBA QTV PYROSHOCK TEST 2 PULSE 1

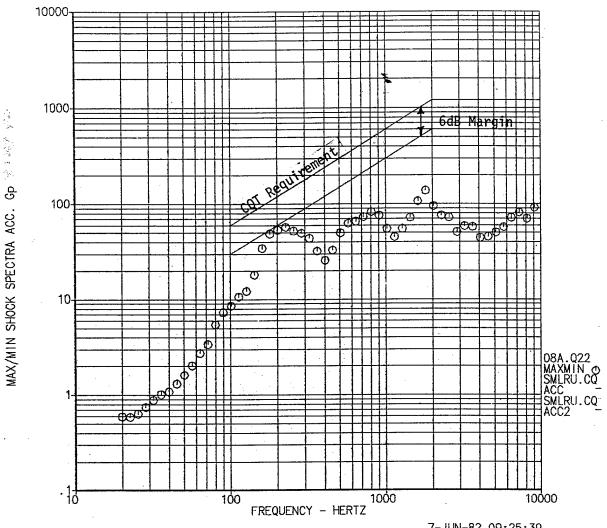


Note: 3.8dB margin between Actual CQT level and maximum expected environment is greater than the 3.0dB minimum margin required to comply with intent of MIL-STD-1540A.

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CHECK				environment with component	ALL OA
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	AGE 61
				THE BUETING COMPANY SEE	

FIGURE 2-54 SHOCK SPECTRA (Q = 10) A QTV PYROSHOCK TEST 2 PULSE 2

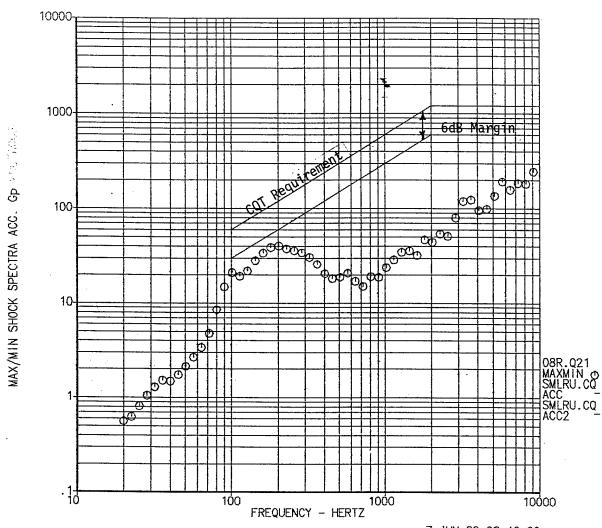


7-JUN-82 09:25:39

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CHECK				environment with component	7100 071
APPD				Test Requirement	
APPD.		1.		THE BOFING COMPANY	PAGE 62
·		1		THE DULING COMERNIA	A .
		***************************************	i	D290-75303-2 Vol. II	
			1		

FIGURE 2-55
SHOCK SPECTRA (Q = 10)
HO8R QTV PYROSHOCK TEST 2 PULSE 1

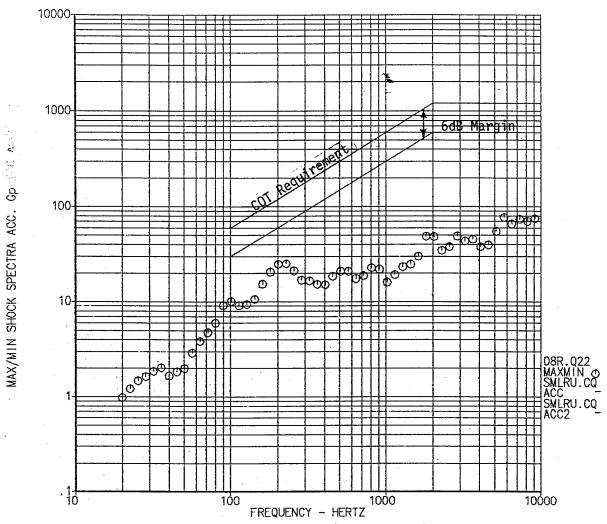


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APPD.		1		environment with component Test Requirement	
APPD.				THE DOELLIO COMPANY	PAGE 63
				I THE BOLING COMPANY	1,102 00
				D290-75303-2 Vol. II	

FIGURE 2-56
SHOCK SPECTRA (Q = 10)
HOBR QTV PYROSHOCK TEST 2 PULSE 2

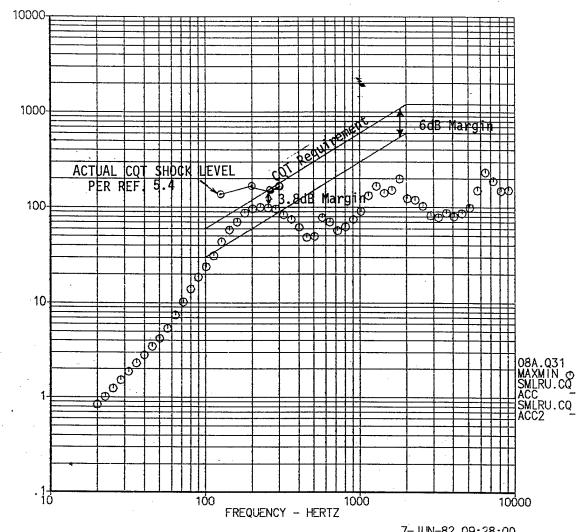


7-JUN-82 09:42:37

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CHECK			••	environment with component	nee on
APPD.				Test Requirement	1.7
APPD.			45	THE BOFING COMPANY	PAGE 64
				THE BULING COMPANTS	

FIGURE 2-57 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 3 PULSE 1



MAX/MIN SHOCK SPECTRA ACC. Gp 1960 1870

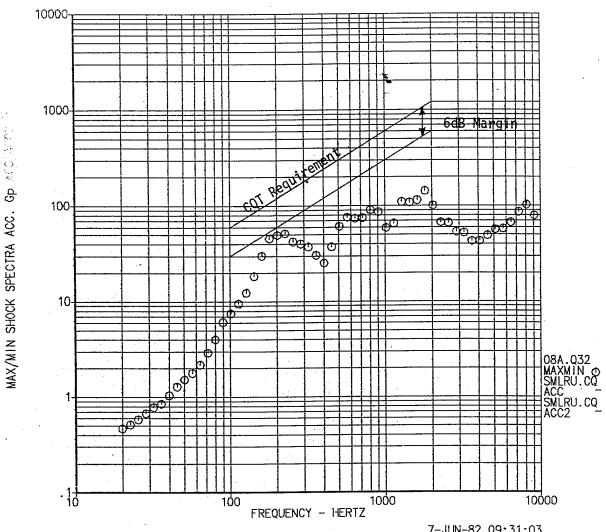
7-JUN-82 09:28:00

Note: 3.8dB margin between Actual CQT level and maximum expected environment is greater than the 3.0dB minimum margin required to comply with intent of MIL-STD-1540A.

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CHECK		1 -		environment with component	, ACC OA
APPD.				environment with component Test Requirement	
APPD.	1			THE-DOE INC COMPANY	PAGE 65
				THE BOLING COMPANY	
				0200 75202 2 Val II	

FIGURE 2-58 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 3 PULSE 2

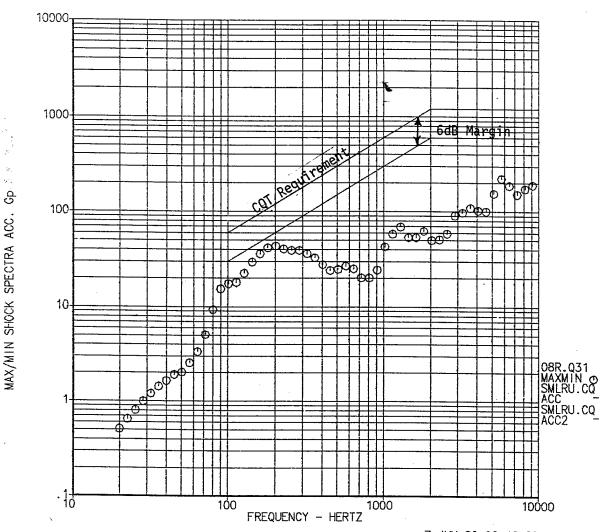


7-JUN-82 09:31:03

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CHECK APPD.		ļ		environment with component Test Requirement		
APPD.		1.			PAGE 66	
	•			INC DUCTING COMPAINT		

FIGURE 2-59
SHOCK SPECTRA (Q = 10)
HO8R QTV PYROSHOCK TEST 3 PULSE 1

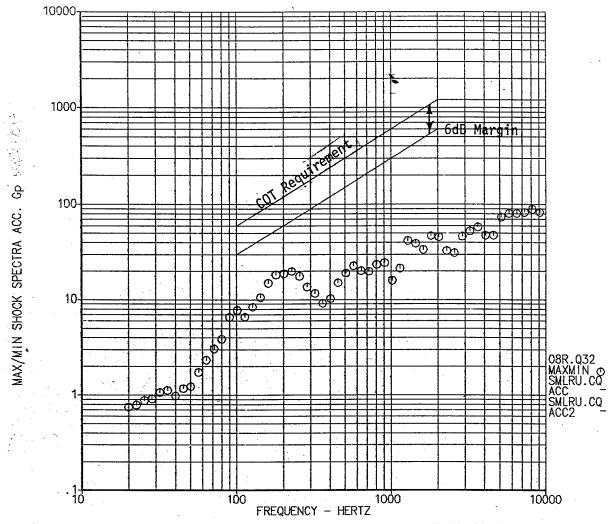


7-JUN-82 09:46:20

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APPD.				Test Requirement	*
APPD.				THE BOFING COMPANY	PAGE 67
				THE DOLLING COMPAINTS	4.

FIGURE 2-60 SHOCK SPECTRA (Q = 10) HOBR QTV PYROSHOCK TEST 3 PULSE 2

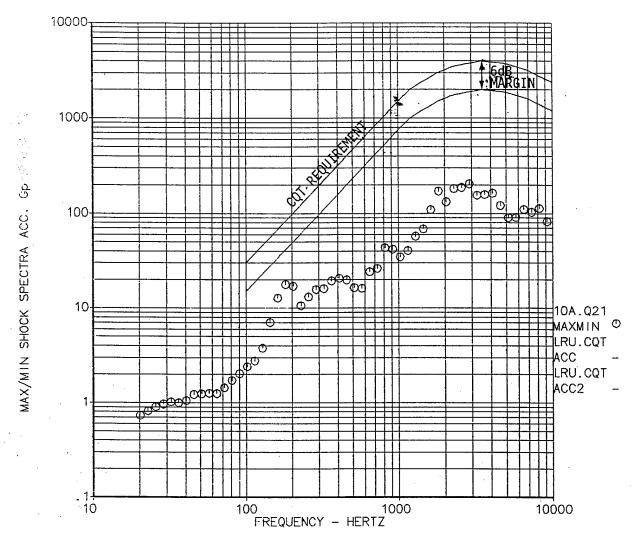


7-JUN-82 09:48:33

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CHECK					environment with component	- 7,00 010
APPD.					Test Requirement	m trace
APPD.	4.4		1 2		THE BOFING COMPANY	PAGE 68
					- THE DULTING COMPAINT 2008	4

FIGURE 2-61 SHOCK SPECTRA (Q = 10) H10A QTV PYROSHOCK TEST 2 PULSE 1

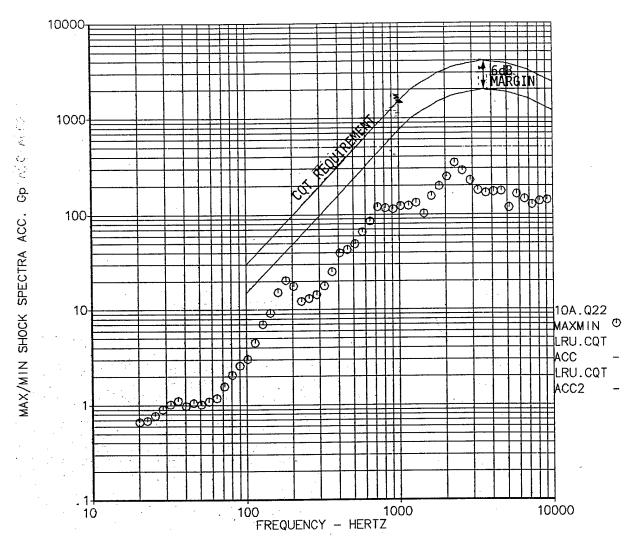


27-MAY-82 18:06:45

TRANSPONDER B

CALC	27MAY82	REVISED	DATE	Comparison of component shock Acc 10A
CHECK				environment with component
APPD.				Test Requirement
APPD.				THE DOE INC COMPANY PAGE 69
				THE BOEING COMPANY

FIGURE 2-62 SHOCK SPECTRA (Q = 10) H10A QTV PYROSHOCK TEST 2 PULSE 2

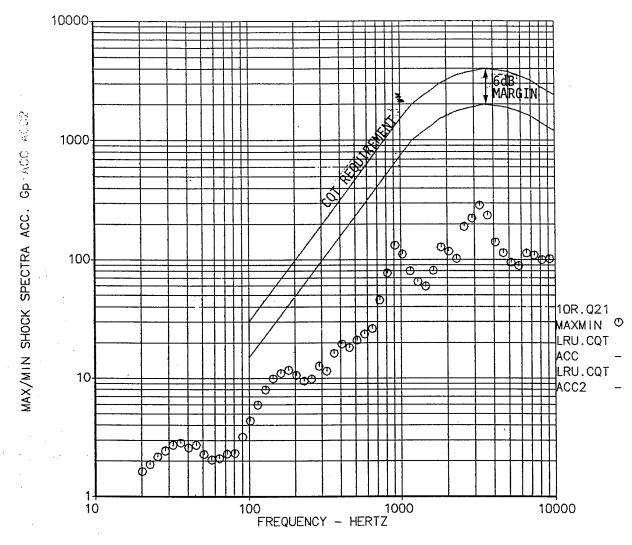


27-MAY-82 18:08:00

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CALC	27MAY82	REVISED	DATE	Comparison of component shock Acc 10A
CHECK	15/5	<u> </u>	·	environment with component Test Requirement
APPD.	1		' '	Test Requirement
APPD.	14.4			THE BOFING COMPANY
				THE DOLLING COMMETAIN SAME

FIGURE 2-63 SHOCK SPECTRA (Q = .10) H1OR QTV PYROSHOCK TEST 2 PULSE 1

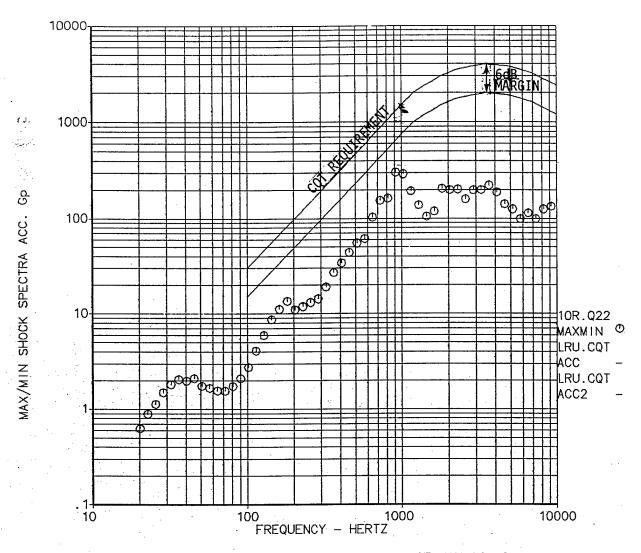


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CHECK		1		environment with component	7.00 Tok
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 71
				THE DOLLING COMPAINT	
				D290-75303-2 Vol. II	

FIGURE 2-64
SHOCK SPECTRA (Q = .10)
H10R QTV PYROSHOCK TEST 2 PULSE 2

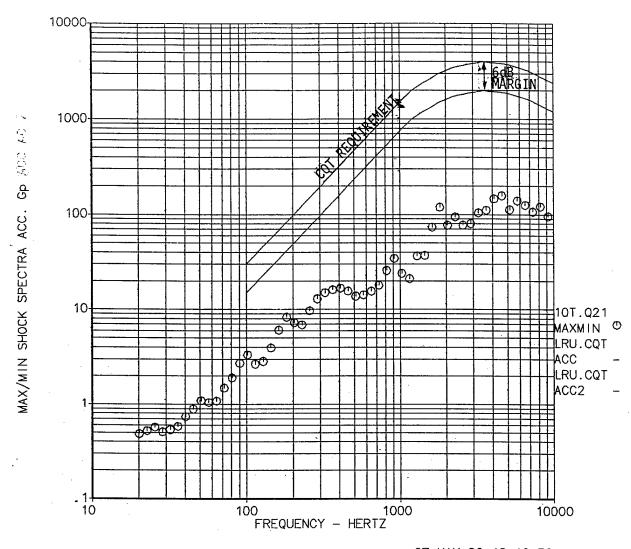


27-MAY-82 18:10:37

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CHECK				environment with component
APPD.				Test Requirement
APPD.				THE BOFING COMPANY PAGE 72
				THE DOL LING COMEANT MESSAGE

FIGURE 2-65 SHOCK SPECTRA (Q = 10) H1OT QTV PYROSHOCK TEST 2 PULSE 1

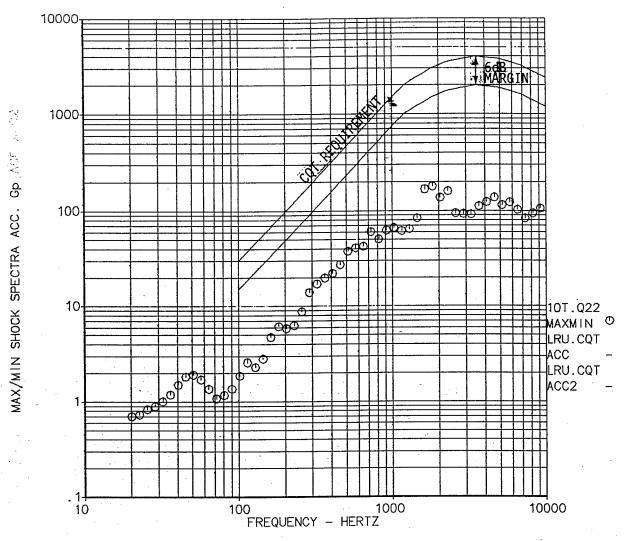


27-MAY-82 18:12:50

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 10T
CHECK	1			environment with component	
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 73
				. THE DUETING COMPAINT	

FIGURE 2-66: SHOCK SPECTRA (Q = 10) H10T QTV PYROSHOCK TEST 2 PULSE 2

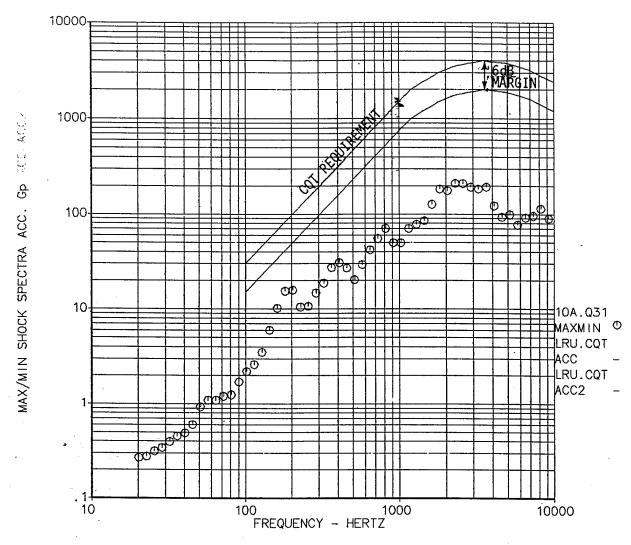


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				THE DOLLING COMMERNIT SEE	

FIGURE 2-67 SHOCK SPECTRÁ (Q = 10) H10A QTV PYROSHOCK TEST 3 PULSE 1

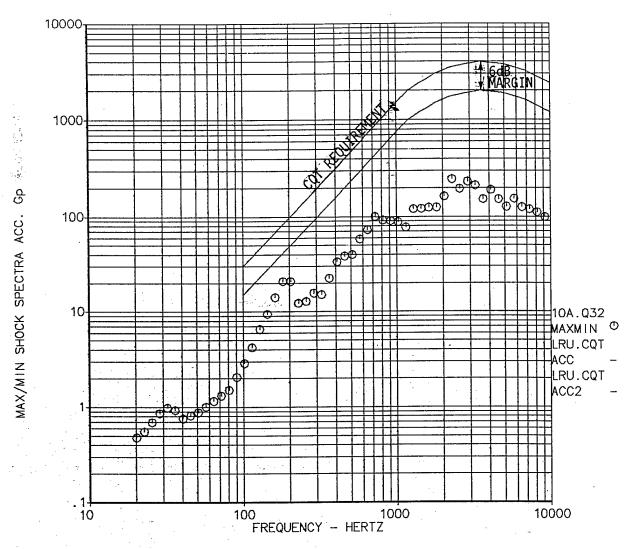


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APPD.				THE DOEING COMPANY	PAGE 75
		-		THE BOLING COMPANY	

FIGURE 2-68
SHOCK SPECTRA (Q = 10)
H10A QTV PYROSHOCK TEST 3 PULSE 2

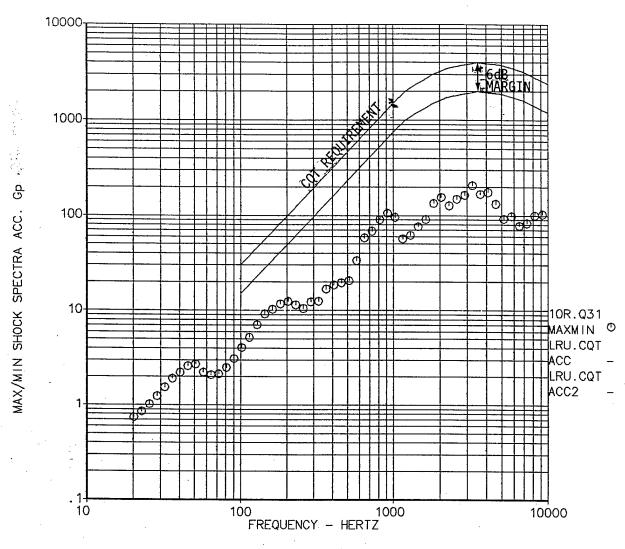


27-MAY-82 18:09:17

TRANSPONDER B

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	emilia.				THE DOLLING COMMANT REPORT

FIGURE 2-69 SHOCK SPECTRA (Q = 10) H10R QTV PYROSHOCK TEST 3 PULSE 1

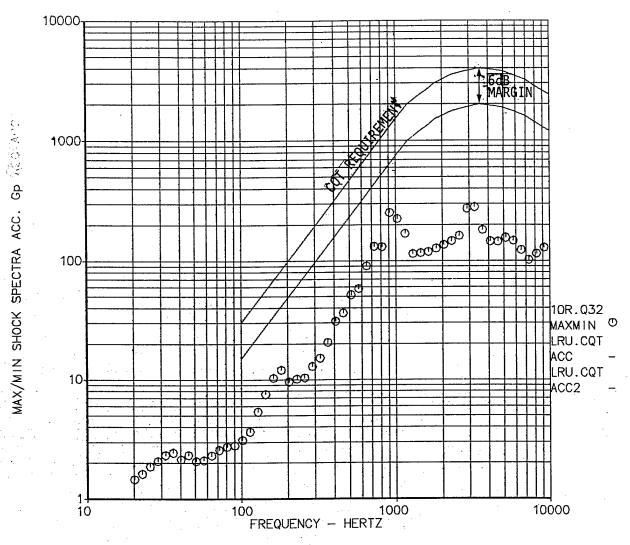


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APPD.				THE BOFING COMPANY PAGE 77
				THE BUETING COMPANY

FIGURE 2-70 SHOCK SPECTRA (Q = .10) H1OR QTV PYROSHOCK TEST 3 PULSE 2

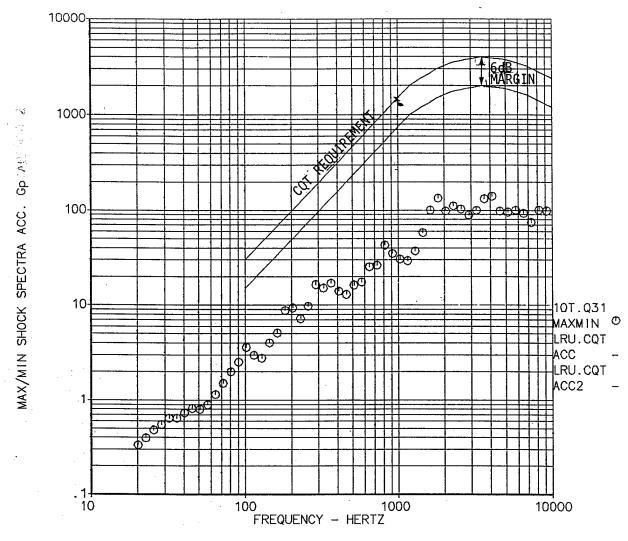


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FIGURE 2-71 SHOCK SPECTRA (Q = 10) H1OT QTV PYROSHOCK TEST 3 PULSE 1

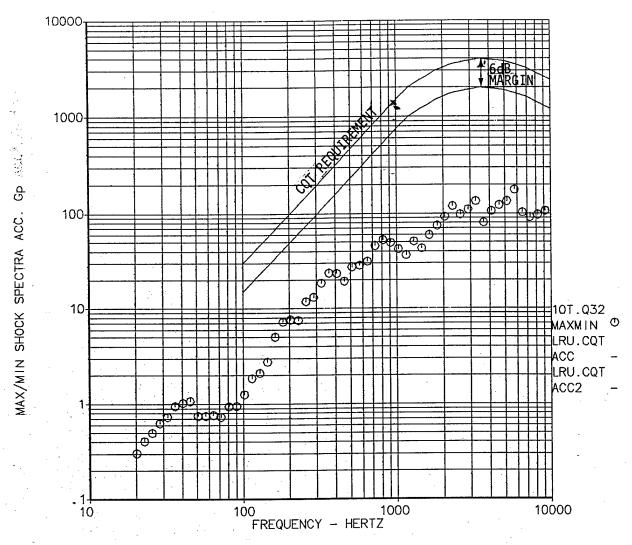


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TRANSPONDER B

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APPD.				THE DOLLNO COMPANY	PAGE 79
				THE BOFING COMPANA [3/4]	Çer Î

FIGURE 2-72 SHOCK SPECTRA (Q = 10) H10T QTV PYROSHOCK TEST 3 PULSE 2

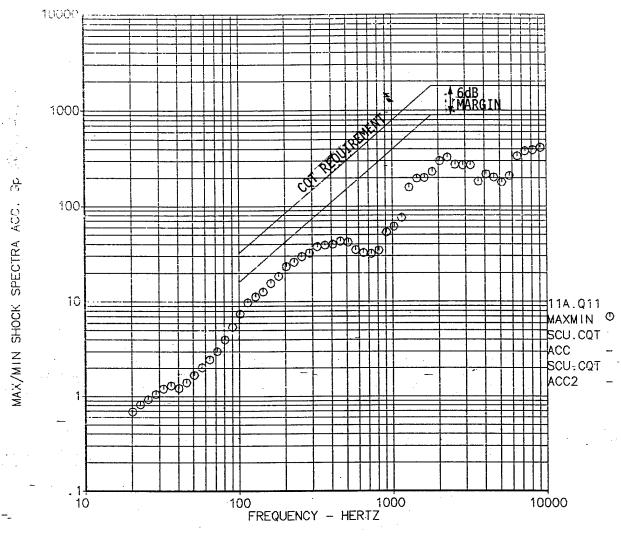


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				THE DOLLING COMMANY AND	***

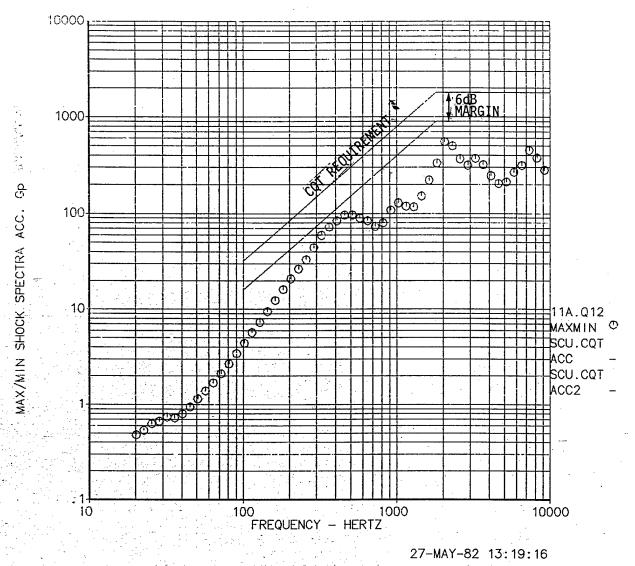
FIGURE 2-73
SHOCK SPECTRA (Q = 10)
H11A QTV PYROSHOCK TEST 1 PULSE 1



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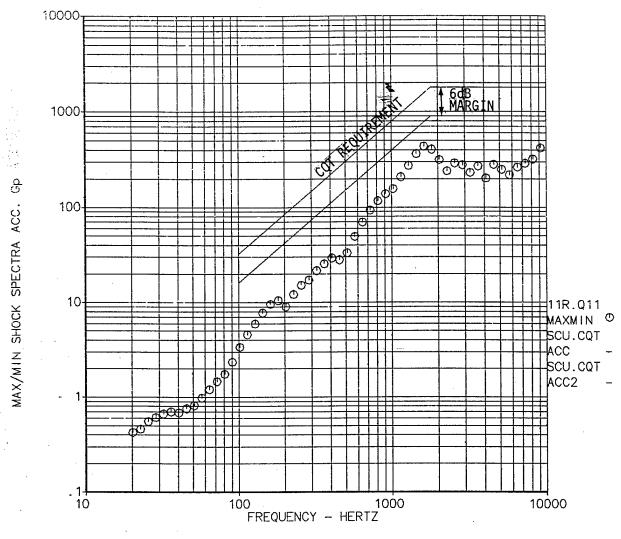
FIGURE 2-74 SHOCK SPECTRA (Q = 10) H11A QTV PYROSHOCK TEST 1 PULSE 2



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APPD.					THE BOFING COMPANY PAGE 82	
					TOPE DUE HING COMEAN L 2228 20 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	· j

FIGURE 2-75 SHOCK SPECTRA (Q = 10) H11R QTV PYROSHOCK TEST 1 PULSE 1

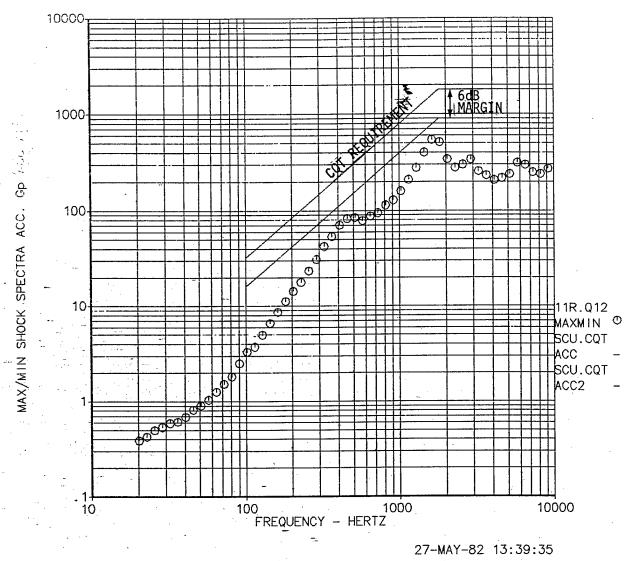


27-MAY-82 13:37:42

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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 11R
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APPD.				THE BOEING COMPANY	PAGE 83

FIGURE 2-76 SHOCK SPECTRA (Q = 10) H11R QTV PYROSHOCK TEST 1 PULSE 2

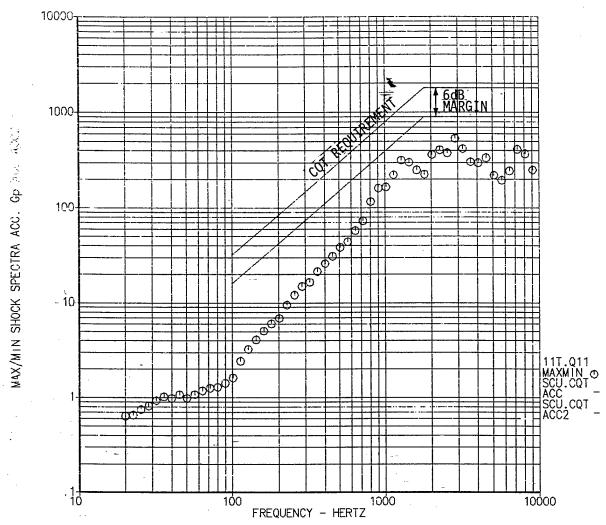


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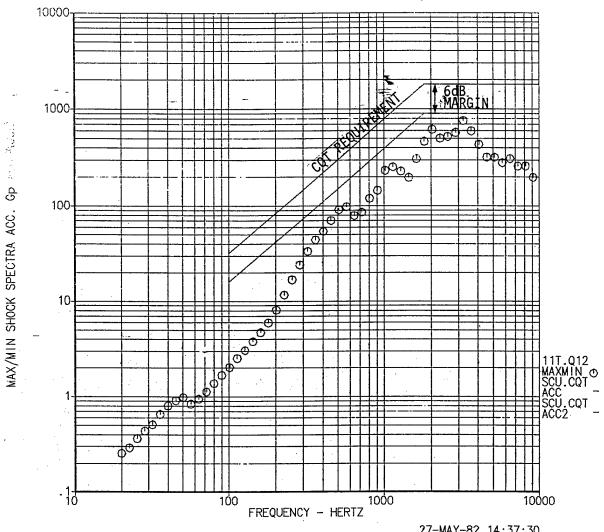
FIGURE 2-77
SHOCK SPECTRA (Q = 10)
H11T QTV PYROSHOCK TEST 1 PULSE 1



27-MAY-82 14:34:56

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				THE BOETNG COMPANY	7.6	
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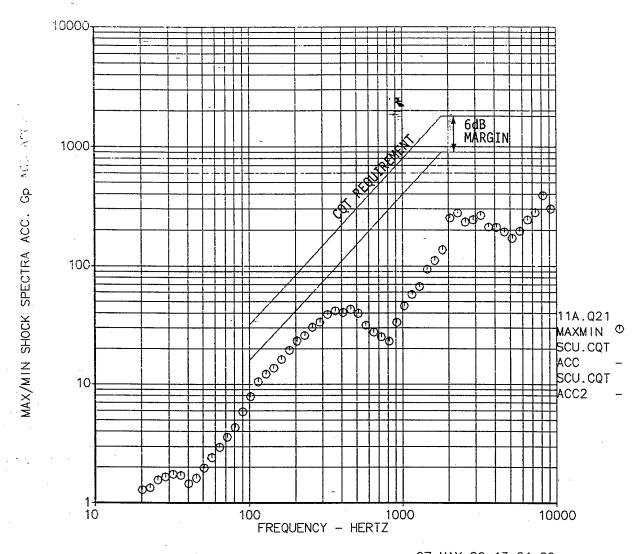
FIGURE 2-78
SHOCK SPECTRA (Q = 10)
QTV PYROSHOCK TEST 1 PULSE 2



27-MAY-82 14:37:30

CALC		27MAY82	REVISED	DATE	Comparison of component shock	Acc 11T
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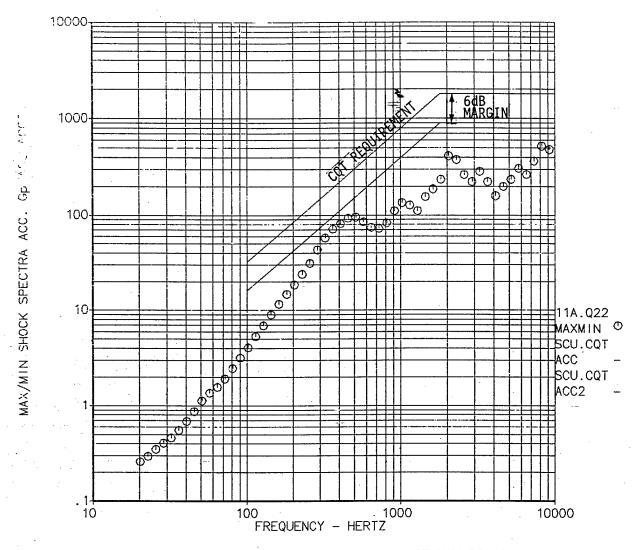
FIGURE 2-79
SHOCK SPECTRA (Q = 10)
H11A QTV PYROSHOCK TEST 2 PULSE 1



27-MAY-82 13:21:20

CALC		27MAY82	REVISED	DATE	Comparison of component shock	Acc 11A
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<u> </u>					THE DULTING COMPAINT	4
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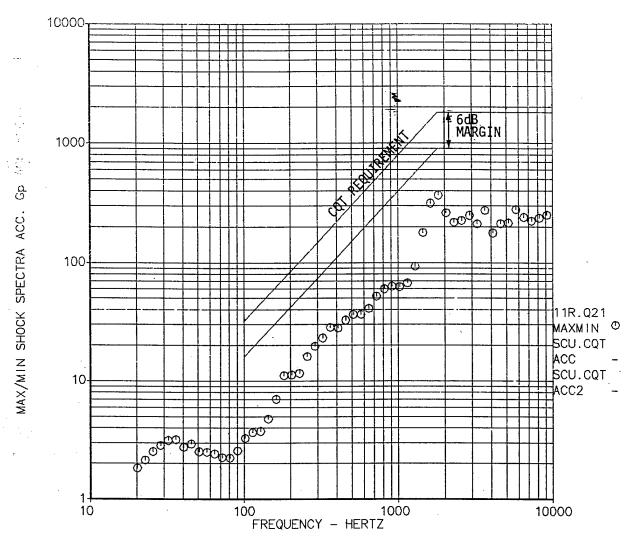
FIGURE 2-80 SHOCK SPECTRA (Q = 10) H11A QTV PYROSHOCK TEST 2 PULSE 2



27-MAY-82 13:23:16

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APPD.					THE DOCING COMDANY PAGE 88	
	41				HE BOETING COMPANY	

FIGURE 2-81 SHOCK SPECTRA (Q = 10) H11R QTV PYROSHOCK TEST 2 PULSE 1

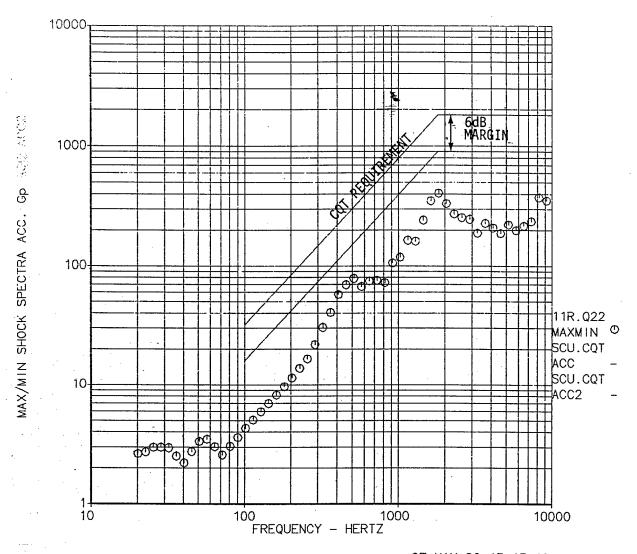


27-MAY-82 13:41:38

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CHECK APPD.		1			environment with component Test Requirement	
APPD.	-				THE BOEING COMPANY	PAGE 89

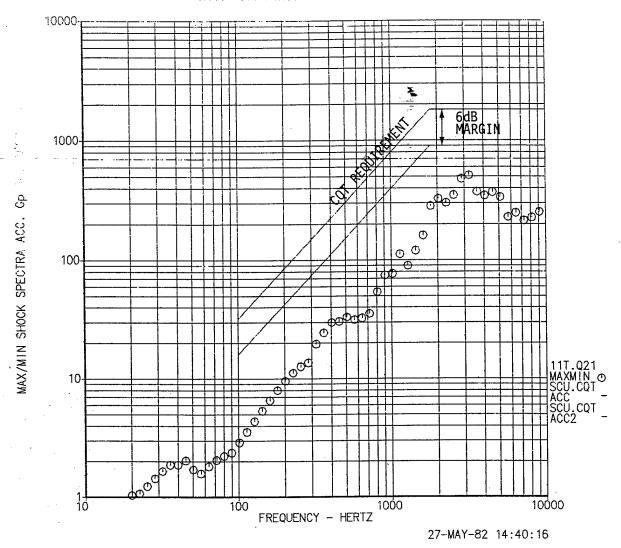
FIGURE 2-82 SHOCK SPECTRA (Q = 10) H11R QTV PYROSHOCK TEST 2 PULSE 2



27-MAY-82 13:43:19

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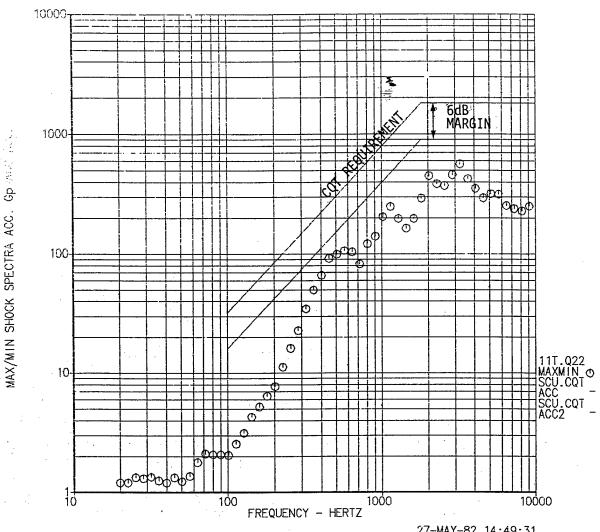
FIGURE 2-83
SHOCK SPECTRA (Q = 10)
H11T OTV PYROSHOCK TEST 2 PULSE 1



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				THE DULTING COMMAINT	

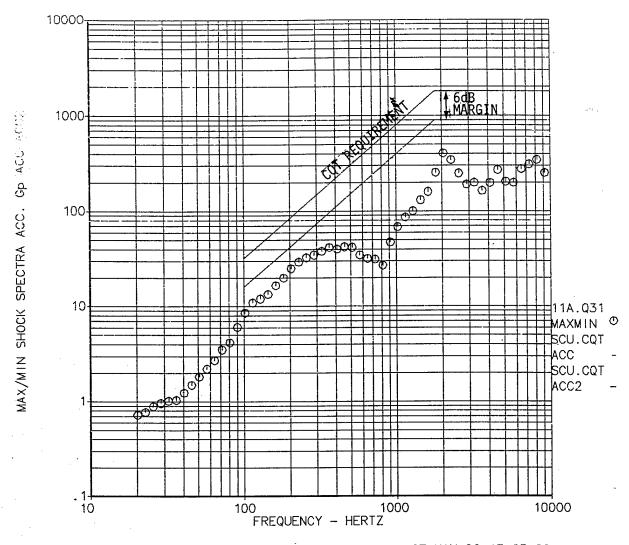
FIGURE 2-84 SHOCK SPECTRA (Q = 10) QTV PYROSHOCK TEST 2 PULSE 2



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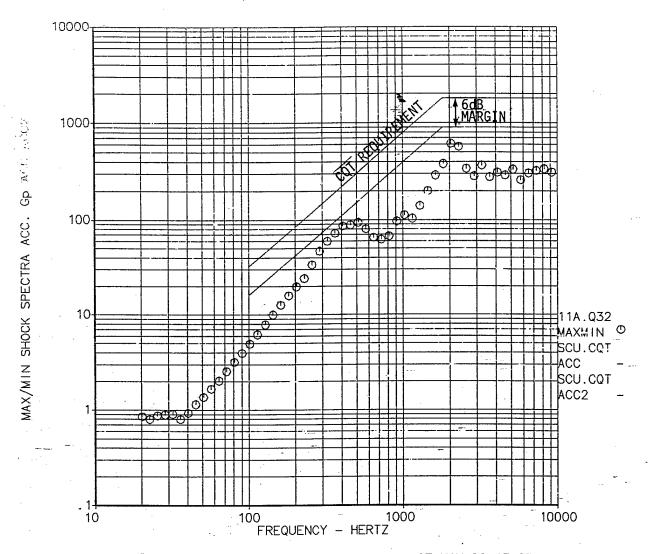
FIGURE 2-85 -SHOCK SPECTRA (Q = 10) H11A QTV PYROSHOCK TEST 3 PULSE 1



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			1	D290-75303-2 Vol. II	for a second	

FIGURE 2-86 SHOCK SPECTRA (Q = 10) H11A QTV PYROSHOCK TEST 3 PULSE 2

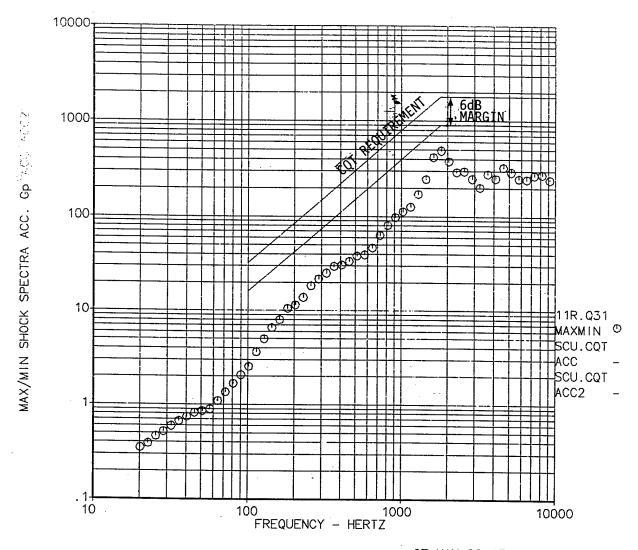


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CHECK		<u> </u>			environment with component	
APPD.	-				Test-Requirement	
APPD.					THE DOLLNO CONDANY	PAGE 94
					THE BUETING CUMPAINT TO S	

FIGURE 2-87
SHOCK—SPECTRA (Q = 10)
H11R QTV PYROSHOCK TEST 3 PULSE 1

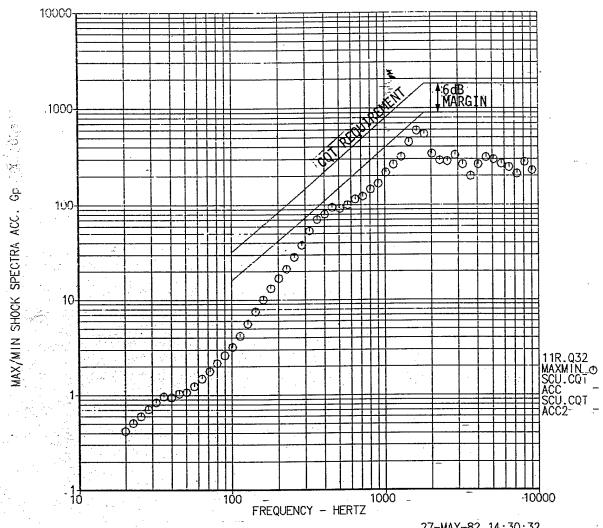


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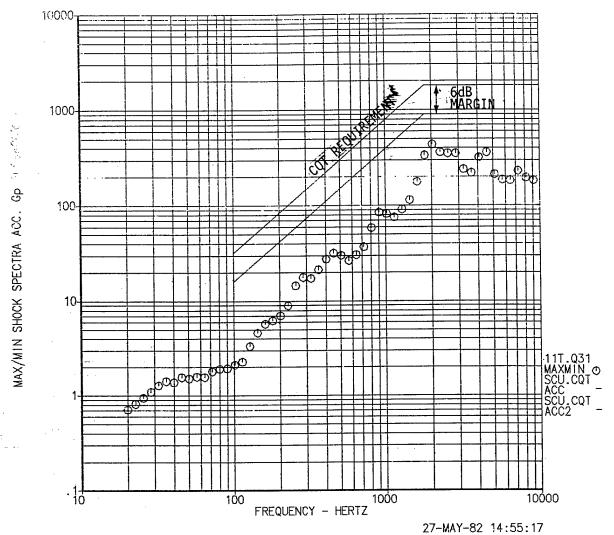
FIGURE 2-88
SHOCK SPECTRA (Q = 10)
H11R QTV PYROSHOCK TEST 3 PULSE 2



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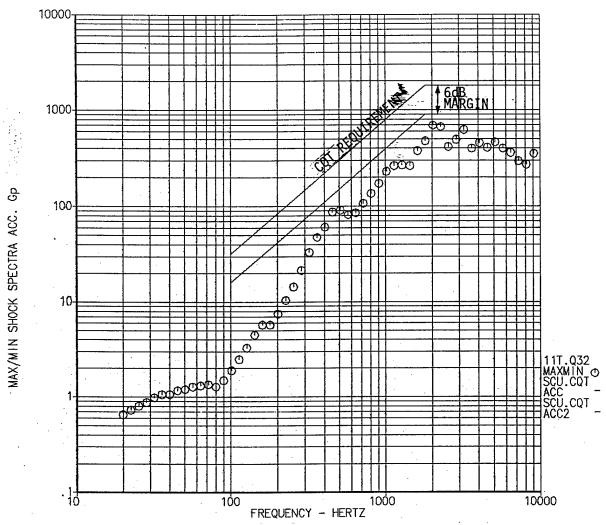
FIGURE 2-89
SHOCK SPECTRA (Q = 10)
QTV PYROSHOCK TEST 3 PULSE 1



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CALC	27MAY82	REVISED	DATE	Comparison of component shock	Acc 11T
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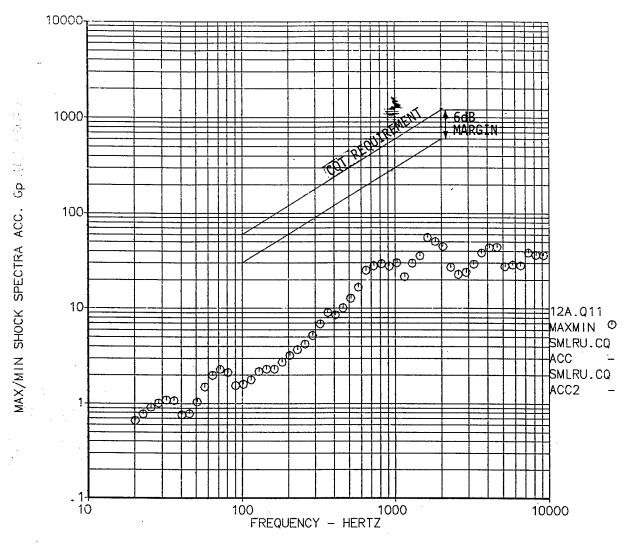
FIGURE 2-90 SHOCK SPECTRA (Q = 10) H11T QTV PYROSHOCK TEST 3 PULSE 2



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APPD.				Test Requirement	
APPD.	# ·			THE DOELNO COMDANY	PAGE 98
				THE BOLING COMPANY 🥒	

FIGURE 2-91 SHOCK SPECTRA (Q = 10) H12A QTV PYROSHOCK TEST 1 PULSE 1

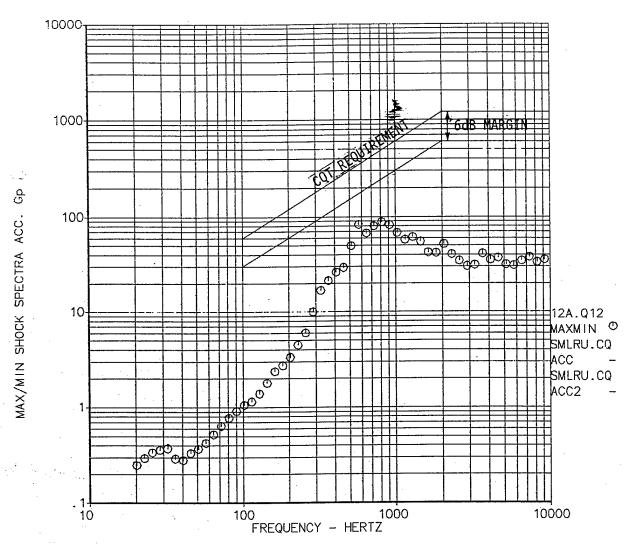


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APPD.				THE BOEING COMPANY	PAGE 99

FIGURE 2-92 SHOCK SPECTRA (Q = 10) H12A QTV PYROSHOCK TEST 1 PULSE 2

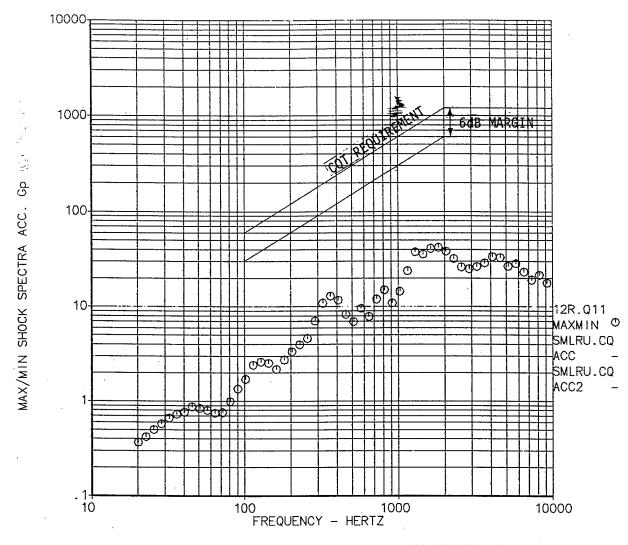


28-MAY-82 08:19:35

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CHECK				environment with component Test Requirement	
APPD.				Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 100
				THE DOLLING COMMERTING	· · ·

FIGURE 2-93
SHOCK SPECTRA (Q = 10)
H12R QTV PYROSHOCK TEST 1 PULSE 1

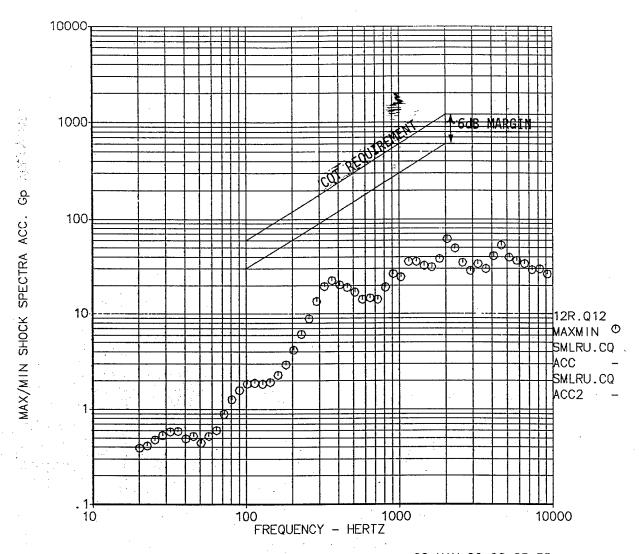


28-MAY-82 08:24:28

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CALC	28MAY82	REVISED	DATE	Comparison of component shock Acc 12R
CHECK		,,		environment with component
APPD.				Test Requirement
APPD.				THE BOFING COMPANY PAGE 101
•				THE DUETING COMPANT SERVICE.

FIGURE 2-94
SHOCK SPECTRA (Q = 10)
H12R QTV PYROSHOCK TEST 1 PULSE 2

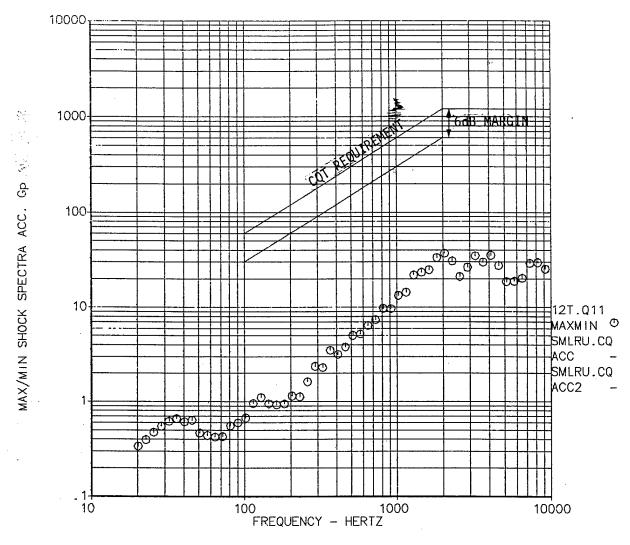


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CALC	28MAY82	REVISED -	DATE	Comparison of component shock Acc 12R	
CHECK	 			environment with component	
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY 27 PAGE 102	
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FIGURE 2-95 SHOCK SPECTRA (Q = 10) H12T QTV PYROSHOCK TEST 1 PULSE 1

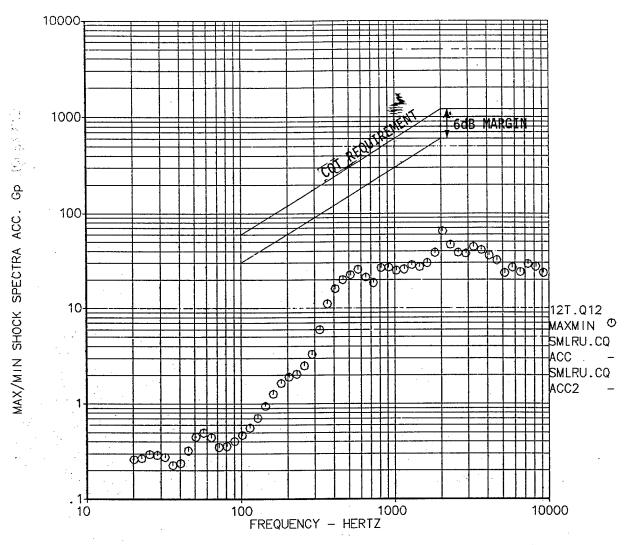


28-MAY-82 08:27:03

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APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 103
				THE DUETING COMEANT	. 3. 1

FIGURE 2-96 SHOCK-SPECTRA (Q = 10) H12T QTV PYROSHOCK TEST 1 PULSE 2

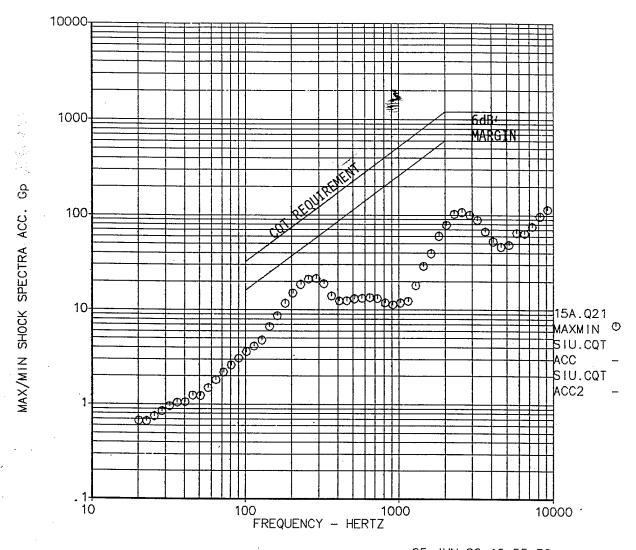


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CHECK			environment with component
APPD.			Test Requirement
APPD.			THE ROFING COMPANY PAGE 104

FIGURE 2-97
SHOCK SPECTRA (Q = 10)
H15A QTV PYROSHOCK TEST 2 PULSE 1

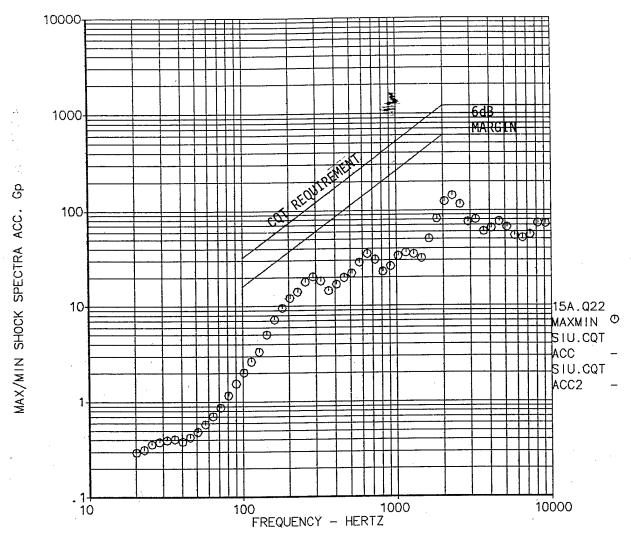


25-JUN-82 12:55:36

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CHECK				enviromnent with component	7100 100
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 05
				THE BOFING COMPANY	105

FIGURE 2-98 SHOCK SPECTRA (Q = 10) H15A QTV PYROSHOCK TEST 2 PULSE 2

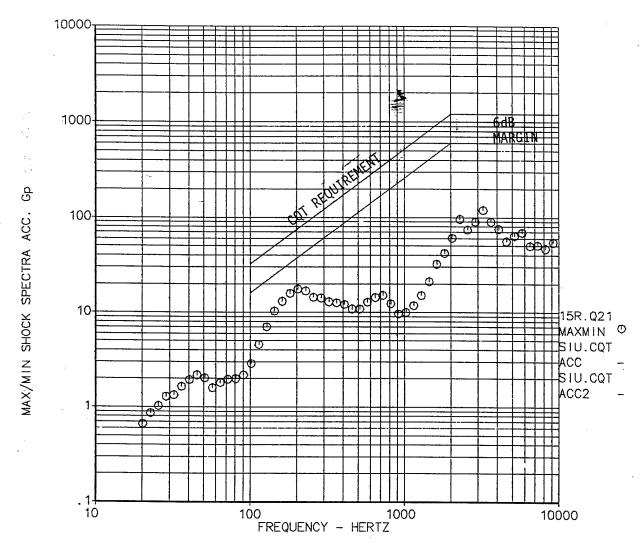


25-JUN-82 12:58:09

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CALC	25JUN82	REVISED	DATE	Comparison of component shock	15A
CHECK				environment with component	
APPD.			<u> </u>	Test Requirement	
APPD.				I THE ROFING COMPANY	PAGE 106
. !			1 .	THE DOCTION COMMENSATION	1

FIGURE 2-99 SHOCK SPECTRA (Q = 10) H15R QTV PYROSHOCK TEST 2 PULSE 1

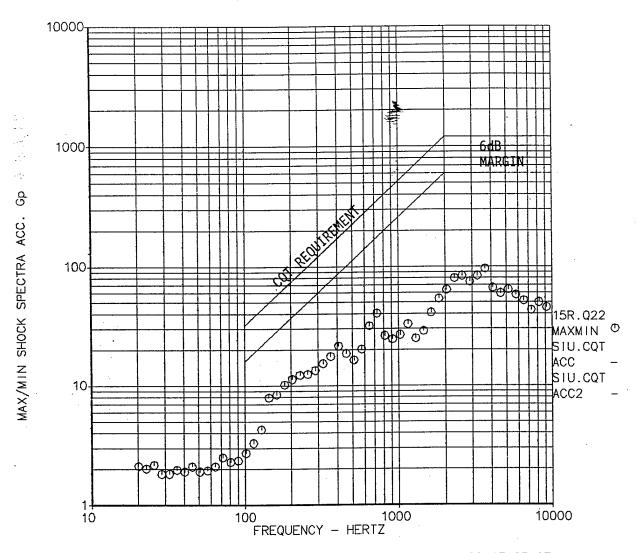


25-JUN-82 13:03:31

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CALC	25JUN82	REVISED	DATE	Comparison of component shock	ACC 15R
CHECK				environment with component	ACC 13K
APPD.				Test Requirement	
APPD.				THE BOELING COMBANIC	PAGE
				THE BOEING COMPANY	10.7

FIGURE 2-100 SHOCK SPECTRA (Q = 10) H15R QTV PYROSHOCK TEST 2 PULSE 2

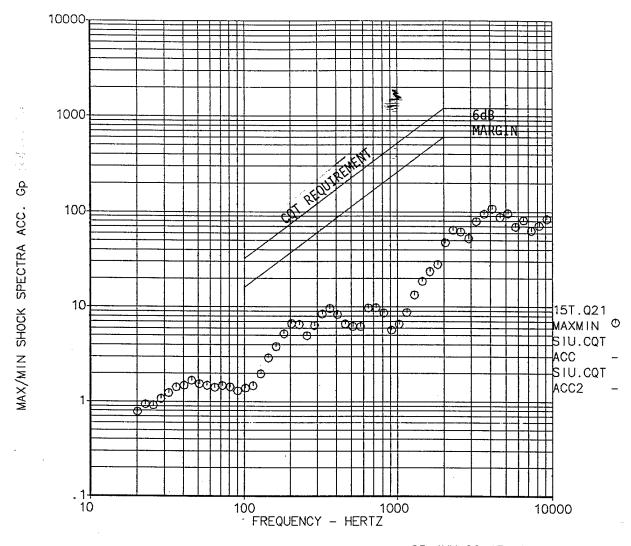


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CALC	,	25JUN82	REVISED	DATE	Comparison of component shock	ACC 15R
CHECK	•				environment with component	
APPD.					Test Requirement	
APPD.					THE BOFING COMPANY	PAGE 108
	. "				THE DOLLING COM ANT	100
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FIGURE 2-101 SHOCK SPECTRA (Q = 10) H15T QTV PYROSHOCK TEST 2 PULSE 1

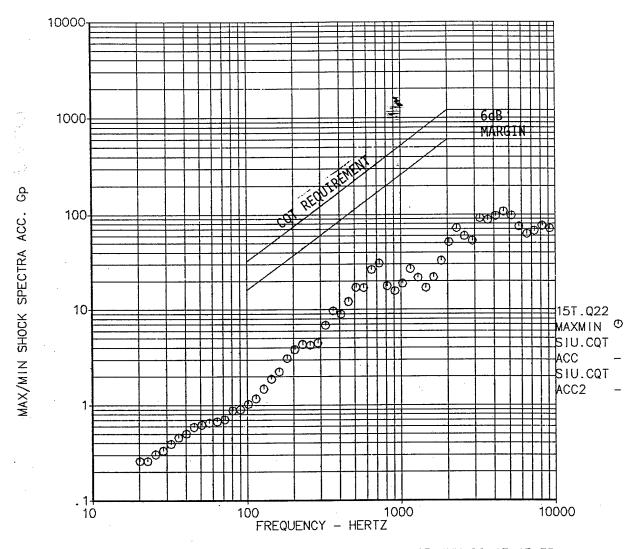


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APPD.				THE DOELNO COMDANY	PAGE	700
				THE BOLING COMPANY		109
				0290-75303-2 Vol. II		

FIGURE2-102 SHOCK SPECTRA (Q = 10) H15T QTV PYROSHOCK TEST 2 PULSE 2

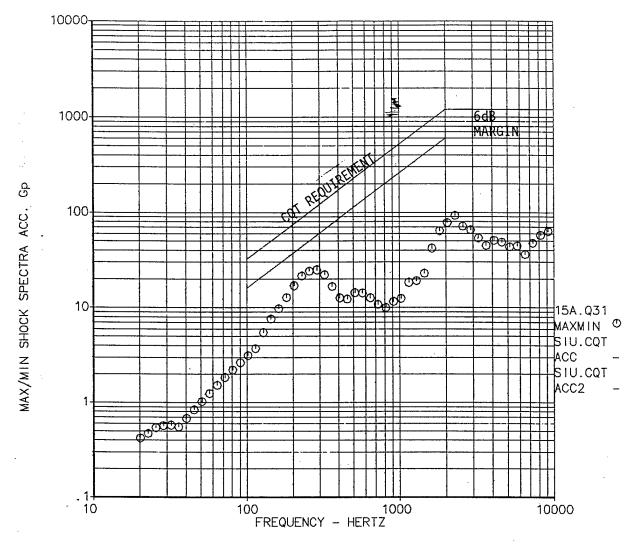


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CALC	25JUN82	REVISED	DATE	Comparison of component shock	ACC 15T
CHECK				environment with component	
APPD.		1		Test Requirement	,
APPD.				THE BOEING COMPANY	PAGE 110
				- THE DOLTING COMMERNIT	

FIGURE 2-103 SHOCK SPECTRA (Q = 10) H15A QTV PYROSHOCK TEST 3 PULSE 1

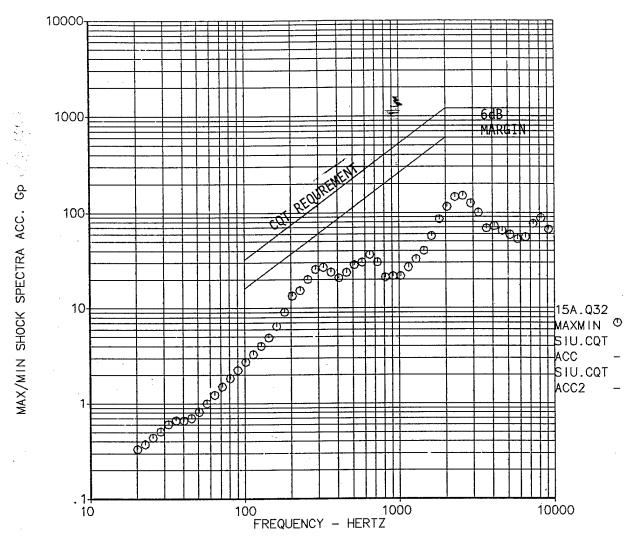


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CALC	25JUN82	REVISED	DATE	Comparison of component shock	ACC 15R
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				HE BOEING COMPANY	111

FIGURE 2-104 SHOCK SPECTRA (Q = 10) H15A QTV PYROSHOCK TEST 3 PULSE 2

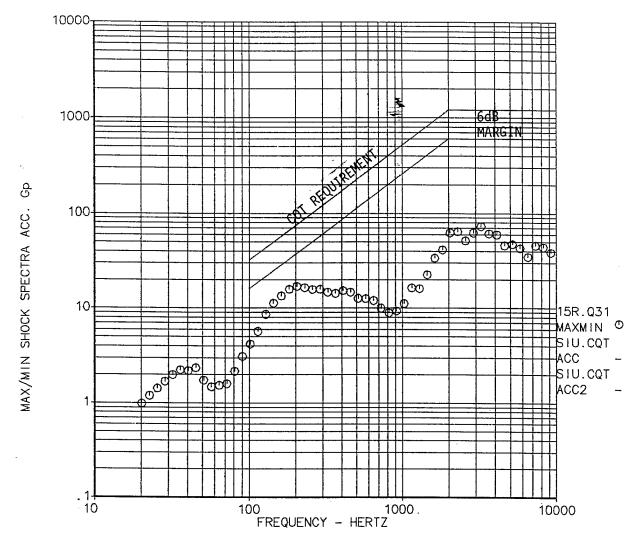


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CALC	25JUN82	REVISED	DATE	Comparison of component shock ACC 15A
CHECK		·		environment with component
APPD.		1		Test Requirement
APPD.				THE ROFING COMPANY PAGE 112
				THE DOCTING COMMAND AND 18 18 18 18 18 18 18 18 18 18 18 18 18

FIGURE 2-105 SHOCK SPECTRA (Q = 10) H15R QTV PYROSHOCK TEST 3 PULSE 1

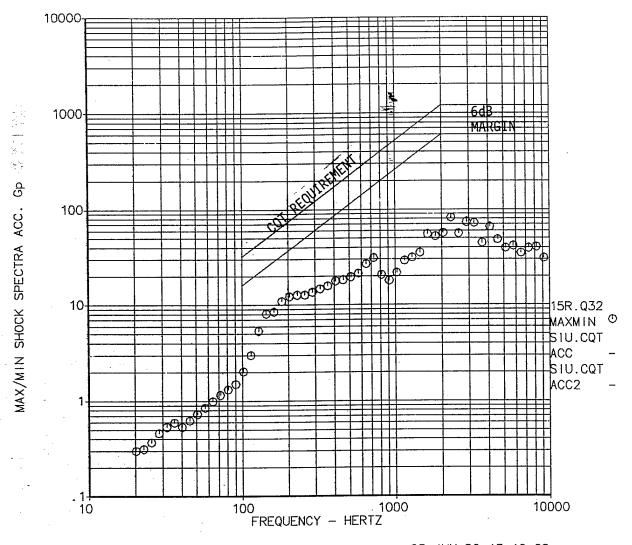


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APPD.				THE BOEING COMPANY	PAGE	113
				D290-75303-2 Vol. II		

FIGURE 2-106 SHOCK SPECTRA (Q = 10) H15R QTV PYROSHOCK TEST 3 PULSE 2

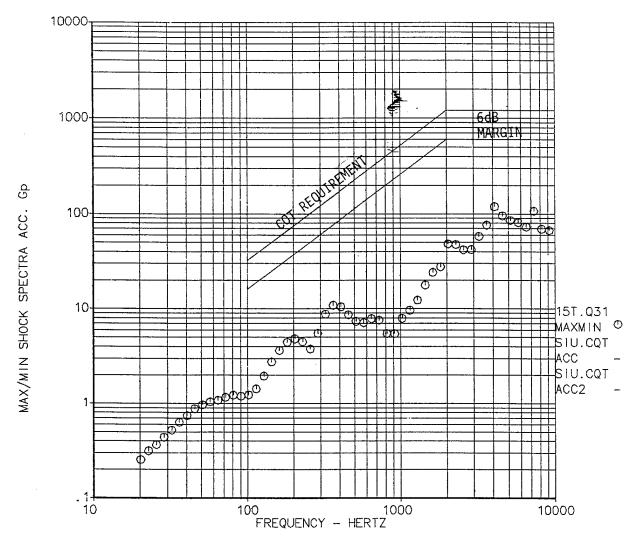


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CHECK APPD.	· ·		· ·		Test Requirement	
APPD.					THE ROFING COMPANY	PAGE 114
					I THE DOLLING COMMENTS	

FIGURE 2-107 SHOCK SPECTRA (Q = 10) H15T QTV PYROSHOCK TEST 3 PULSE 1

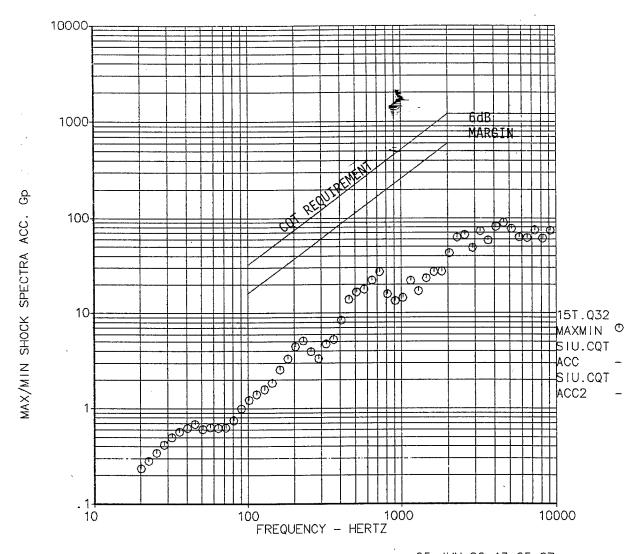


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APPD.				THE BOEING COMPANY	PAGE 115

FIGURE 2-108
SHOCK SPECTRA (Q = 10)
H15T QTV PYROSHOCK TEST 3 PULSE 2

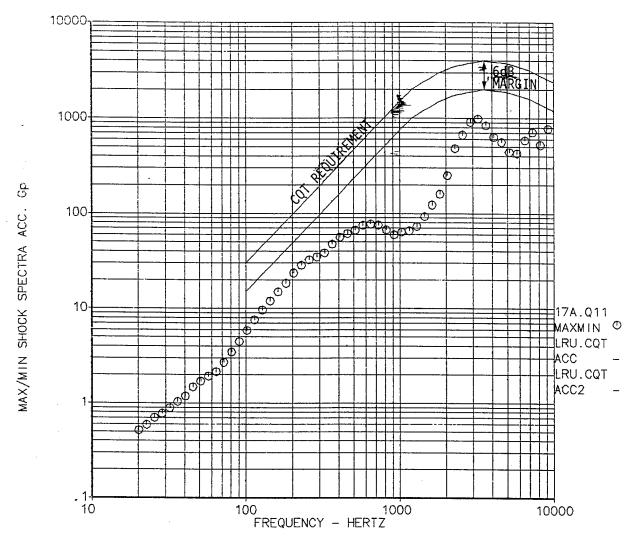


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CALC	25JUN82	REVISED	DATE	Comparison of component shock environment with component	ACC 15T
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 116

FIGURE 2-109 SHOCK SPECTRA (Q = 10) H17A OTV PYROSHOCK TEST 1 PULSE 1

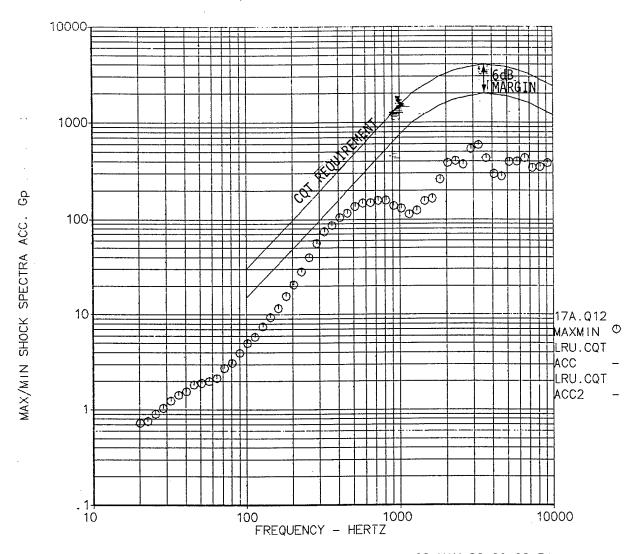


28-MAY-82 09:06:35

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CHECK				environment with component	Acc 17A
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APPD.				THE DOCING CONDANY	PAGE 117
				LHE BOEING COMPANY	117
				D290-75303-2 Vol. II	_

FIGURE 2-110 SHOCK SPECTRA (Q = 10) H17A QTV PYROSHOCK TEST 1 PULSE 2

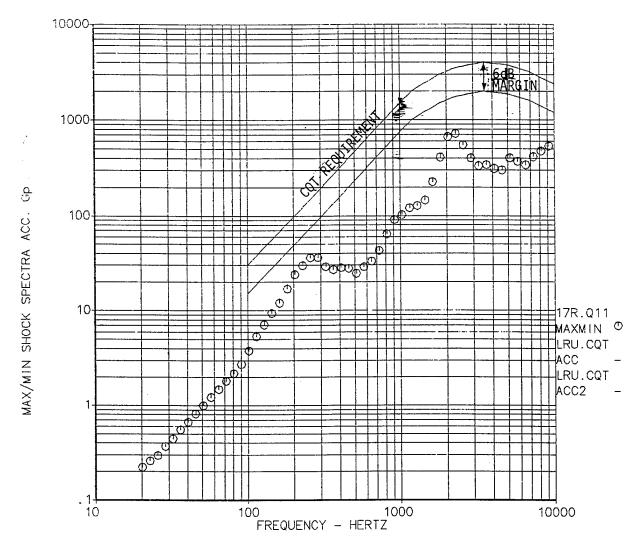


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CHECK				environment with component	1100 1771
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 118
				THE DULTING COMPANT	
			:	D290-75303-2 Vol. II	

FIGURE 2-111 SHOCK SPECTRA (Q = 10) H17R QTV PYROSHOCK TEST 1 PULSE 1

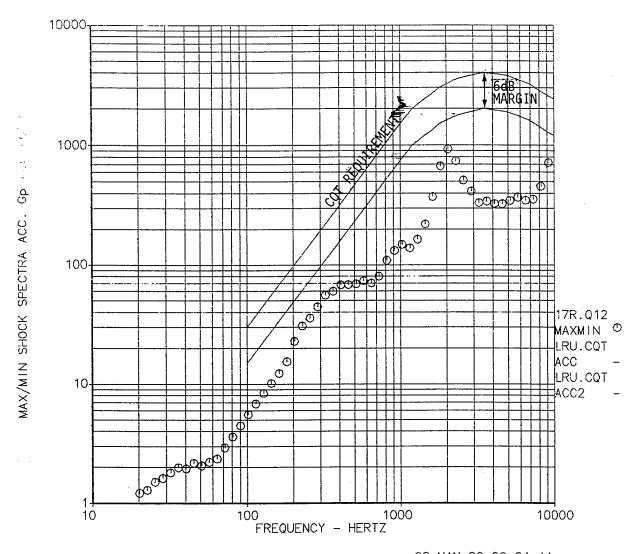


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APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 119
		i		THE DOLLING COMMERNI	

FIGURE 2-112 SHOCK SPECTRA (Q = 10) H17R QTV PYROSHOCK TEST 1 PULSE 2

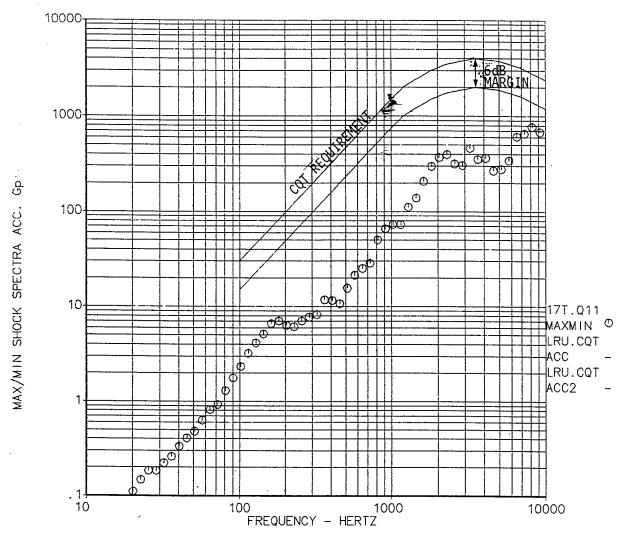


28-MAY-82 09:24:41

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CALC	28MAY82	REVISED	DATE	Comparison of component shock	Acc 17R
CHECK APPD.		<u> </u>		environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 120

FIGURE 2-113
SHOCK SPECTRA (Q = 10)
H17T QTV PYROSHOCK TEST 1 PULSE 1

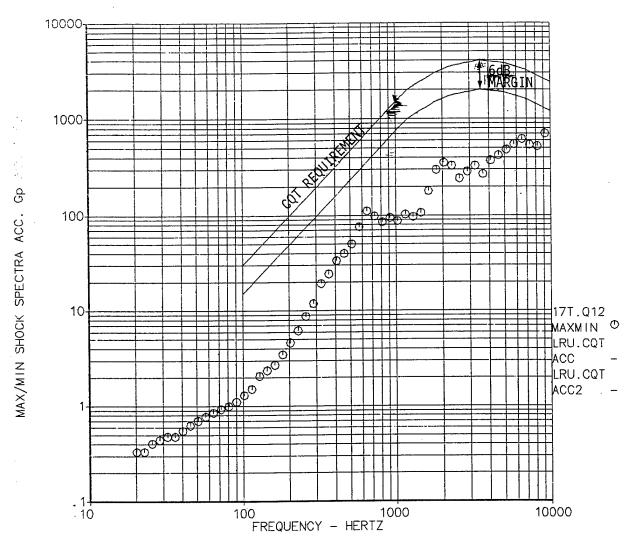


28-MAY-82 09:36:22

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CHECK				environment with component	ACC 1/1
APPD.		-		Test Requirement	j
APPD.				THE BOFING COMPANY	PAGE 121
				INE DUETING CUMPAINT	

FIGURE 2-114
SHOCK SPECTRA (Q = 10)
H17T QTV PYROSHOCK TEST 1 PULSE 2

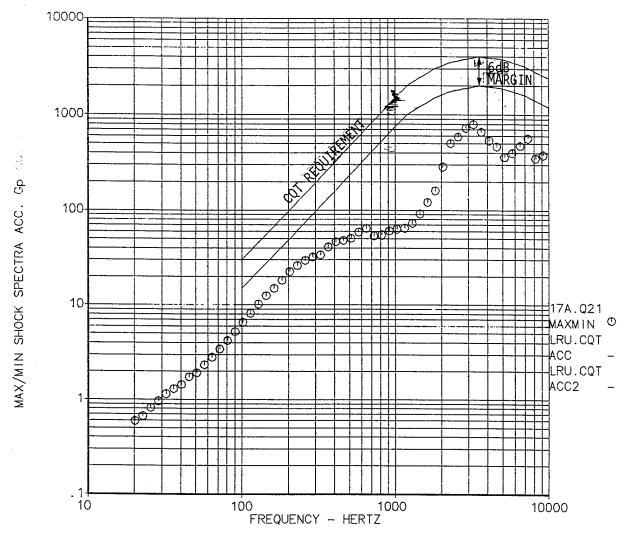


28-MAY-82 09:39:06

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CALC	28MAY82	REVISED	DATE	Comparison of component shock	Acc 17T
CHECK APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 122

FIGURE 2-115
SHOCK SPECTRA (Q = 10)
H17A QTV PYROSHOCK TEST 2 PULSE 1

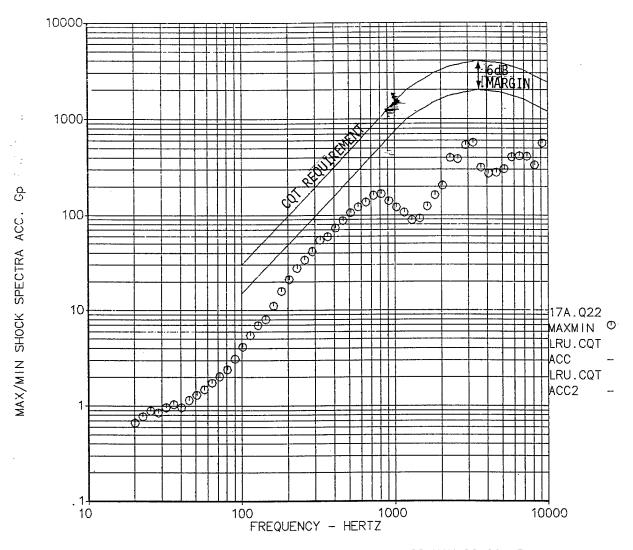


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APPD.			1	environment with component Test Requirement	į
APPD.				THE BOFING COMPANY	PAGE 123
				THE DUE THU CUMPAINT	1.102 120

FIGURE 2-116
SHOCK SPECTRA (Q = 10)
H17A QTV PYROSHOCK TEST 2 PULSE 2

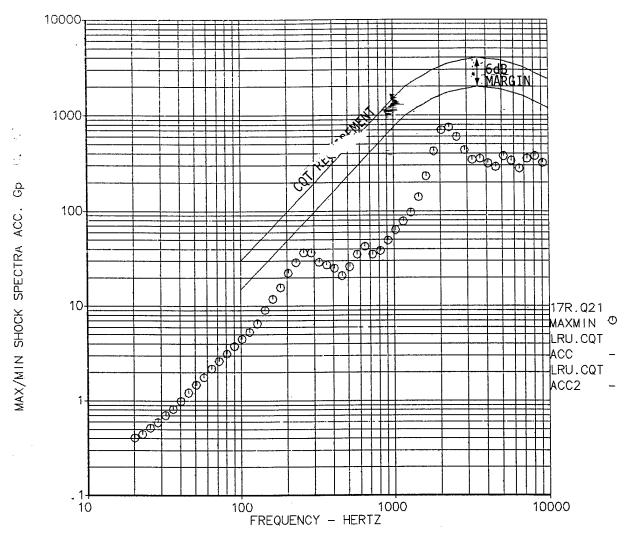


28-MAY-82 09:15:55

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APPD.				Test Requirement
APPD.				THE BOFING COMPANY PAGE 124

FIGURE 2-117
SHOCK SPECTRA (Q = 10)
H17R QTV PYROSHOCK TEST 2 PULSE 1

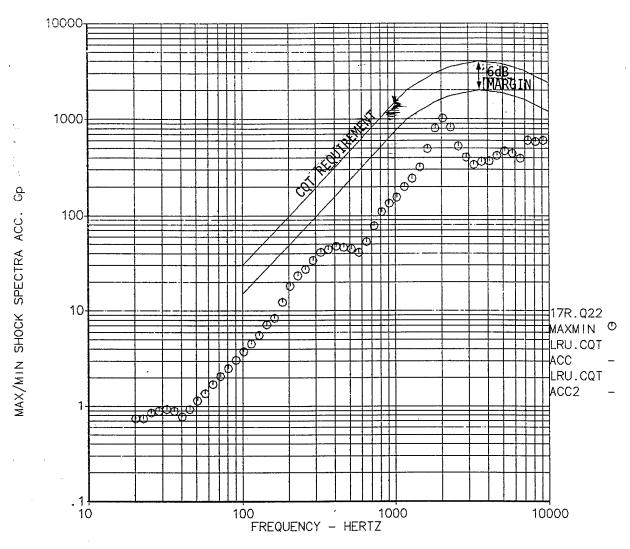


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APPD.				environment with component Test Requirement	
APPD.		<u>.</u>		THE BOEING COMPANY	PAGE 125
B			D29	90-75303-2 Vol. II	

FIGURE 2-118
SHOCK SPECTRA (Q = 10)
H17R QTV PYROSHOCK TEST 2 PULSE 2

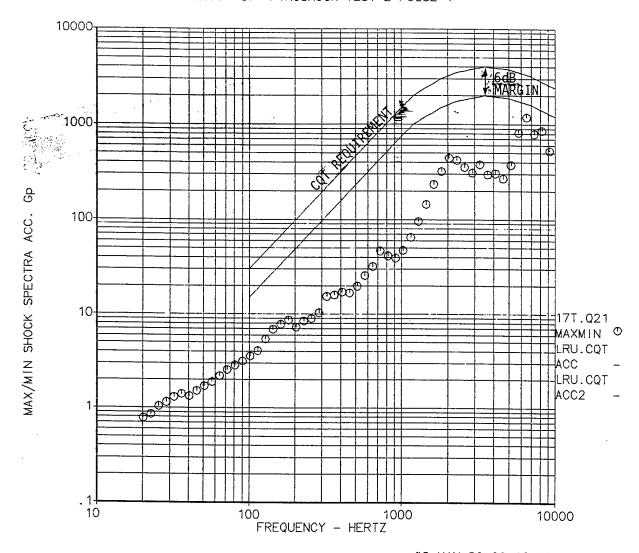


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APPD.				environment with component Test Requirement	
APPD.				THE ROEINP COMPANY	PAGE 126
,		1		THE DOLLING COMILAINT	İ

FIGURE 2-119
SHOCK SPECTRA (Q = 10)
H17T QTV PYROSHOCK TEST 2 PULSE 1

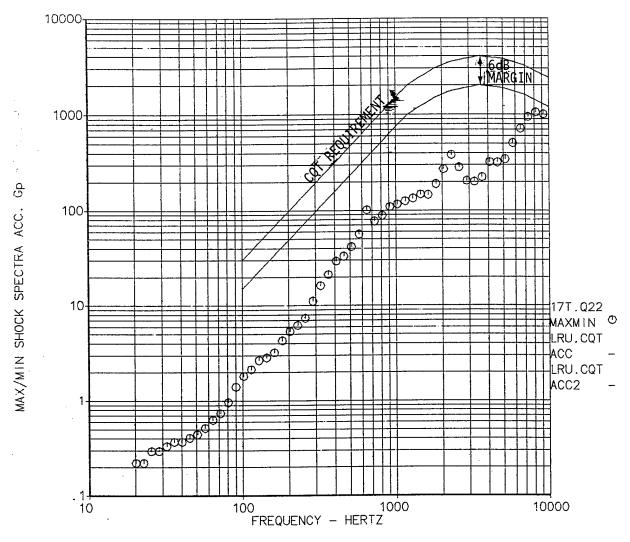


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APPD.				THE BOEING COMPANY	PAGE 127

FIGURE 2-120 SHOCK SPECTRA (Q = 10) H17T QTV PYROSHOCK TEST 2 PULSE 2

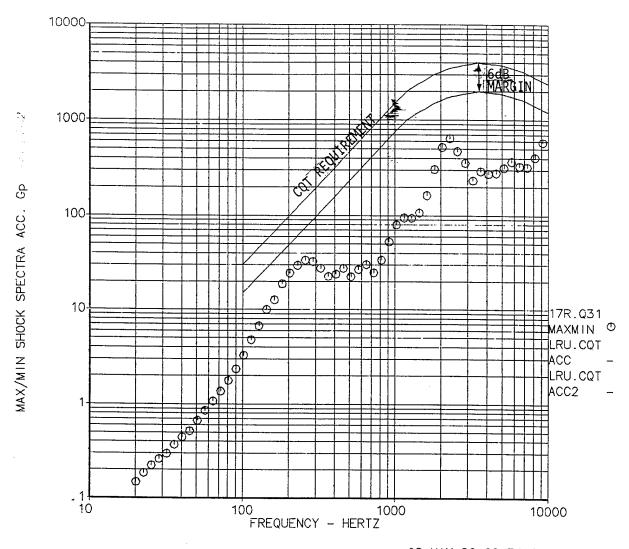


28-MAY-82 09:44:56

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APPD.			1	THE DOCUME ACHDANY	PAGE 128
				THE BOETING COMPANY	

FIGURE 2-121 SHOCK SPECTRA (Q = .10) H17R QTV PYROSHOCK TEST 3 PULSE 1

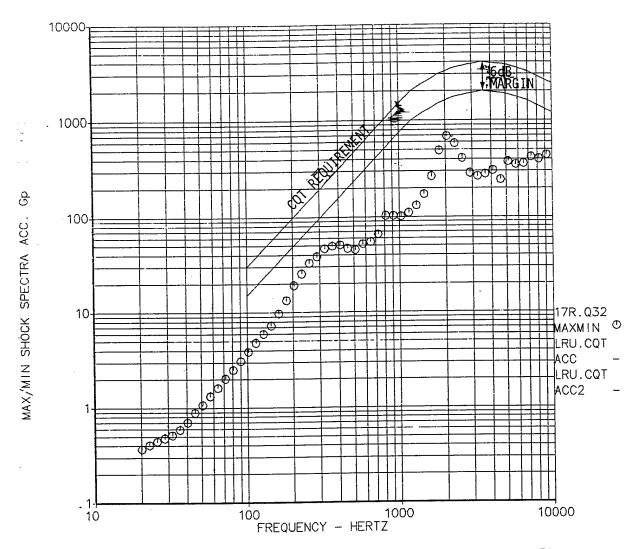


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APPD.				THE BOEING COMPANY	PAGE 129

FIGURE 2-122 SHOCK SPECTRA (Q = 10) H17R QTV PYROSHOCK TEST 3 PULSE 2

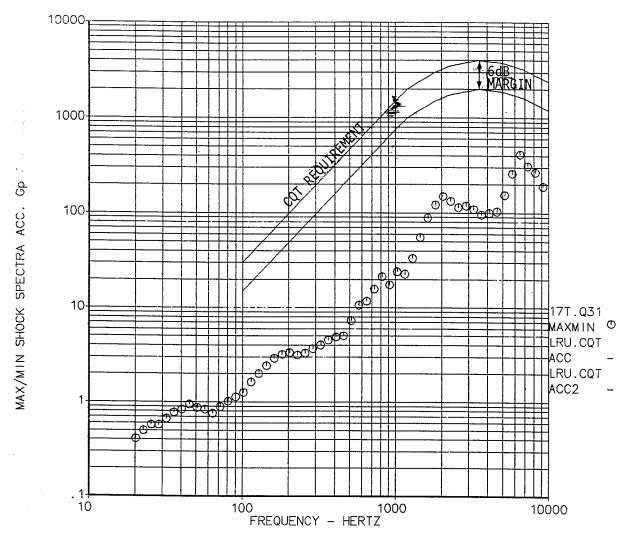


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CALC CHECK	28MAY82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 17R
APPD.					7.00
APPD.			 	THE BOEING COMPANY	PAGE 130

FIGURE 2-123 SHOCK SPECTRA (Q = 10) H17T QTV PYROSHOCK TEST 3 PULSE 1

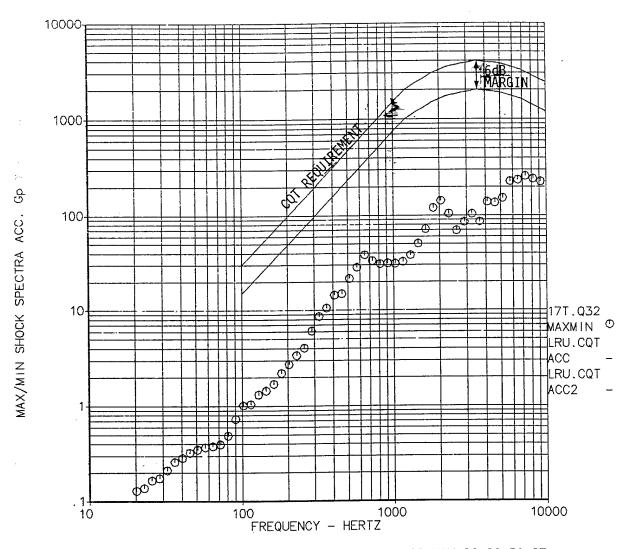


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CALC CHECK APPD.	28MAY82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 17T
APPD.				THE BOEING COMPANY	PAGE 131

FIGURE 2-124
SHOCK SPECTRA (Q = 10)
H117T QTV PYROSHOCK TEST 3 PULSE 2

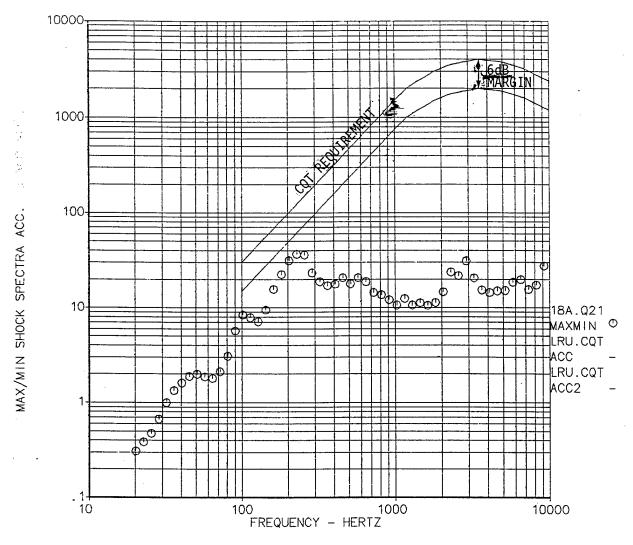


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APPD.				Test Requirement	
APPD.		ļ	ļ	THE BOEING COMPANY	PAGE 132
				D290-75303-2 Vol. II	

FIGURE 2-125 SHOCK SPECTRA (Q = 10) H18A QTV PYROSHOCK TEST 2 PULSE 1

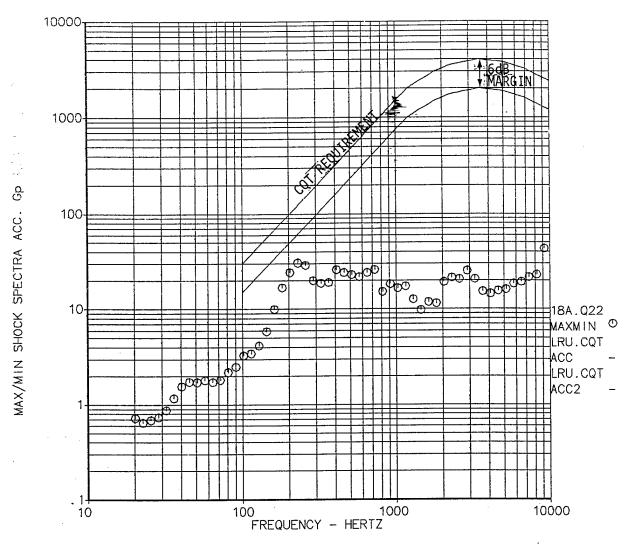


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APPD.				THE BOEING COMPANY	PAGE 133
				D290-75303-2 Vol. II	

FIGURE 2-126 SHOCK SPECTRA (Q = 10) H18A QTV PYROSHOCK TEST 2 PULSE 2

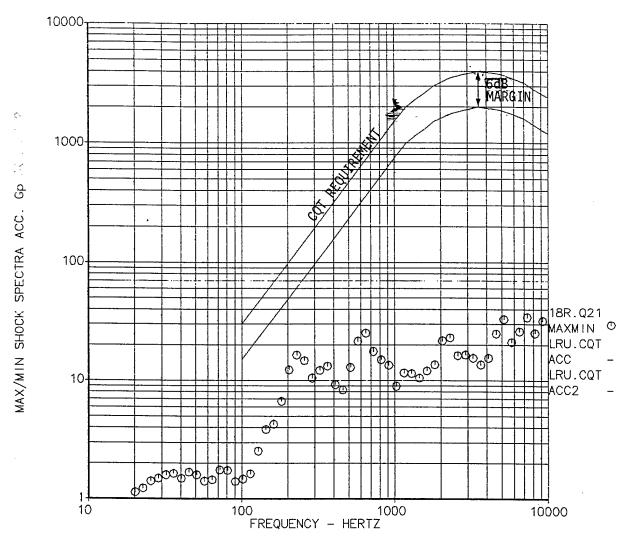


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APPD.				environment with component Test Requirement	
APPD.			·	THE BOEING COMPANY	PAGE 134

FIGURE 2-127
SHOCK SPECTRA (Q = 10)
H18R QTV PYROSHOCK TEST 2 PULSE 1

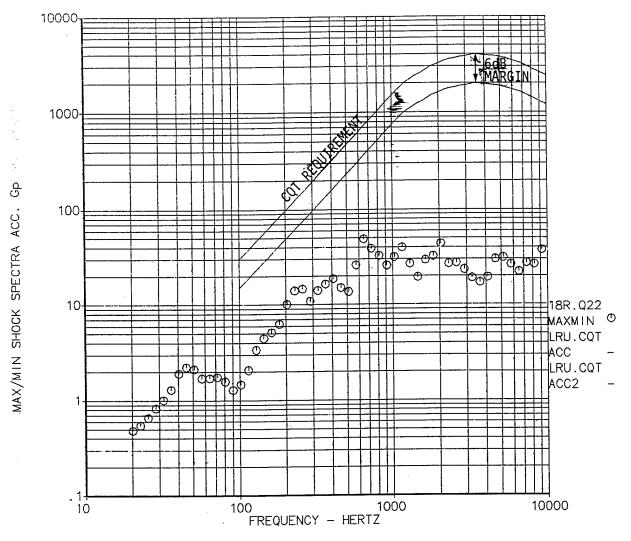


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APPD.				THE BOEING COMPANY	PAGE 135
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FIGURE 2-128 SHOCK SPECTRA (Q = 10) H18R QTV PYROSHOCK TEST 2 PULSE 2

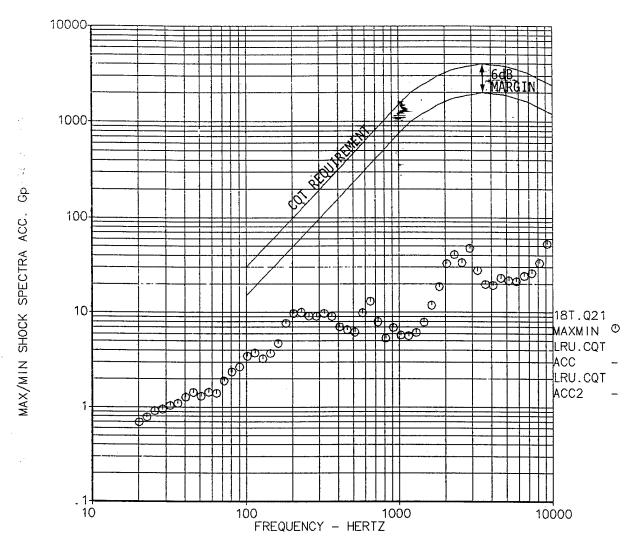


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APPD.				L THE ROFING COMPANY - :	PAGE 136
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FIGURE 2-129.
SHOCK SPECTRA (Q = 10)
H18T QTV PYROSHOCK TEST 2 PULSE 1

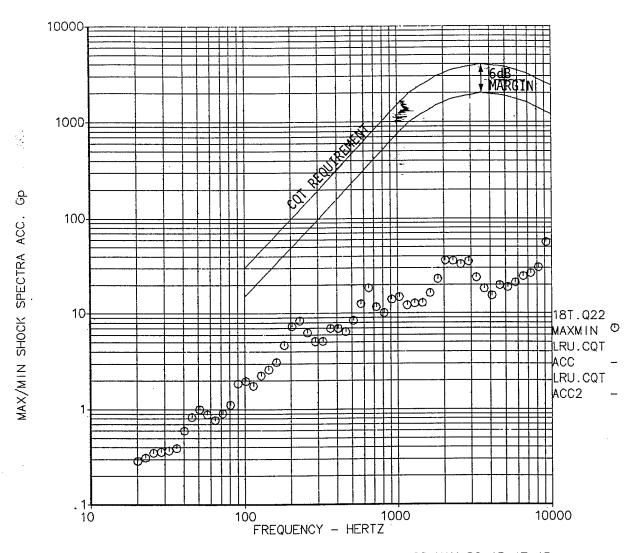


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CHECK		ł I		environment with component	ACC 101
APPD.				Test Requirement	
APPD.				THE DOELNO COMDANY	PAGE 137
				THE BOEING COMPANY	. 107

FIGURE 2-130 SHOCK SPECTRA (Q = 10) H18T QTV PYROSHOCK TEST 2 PULSE 2

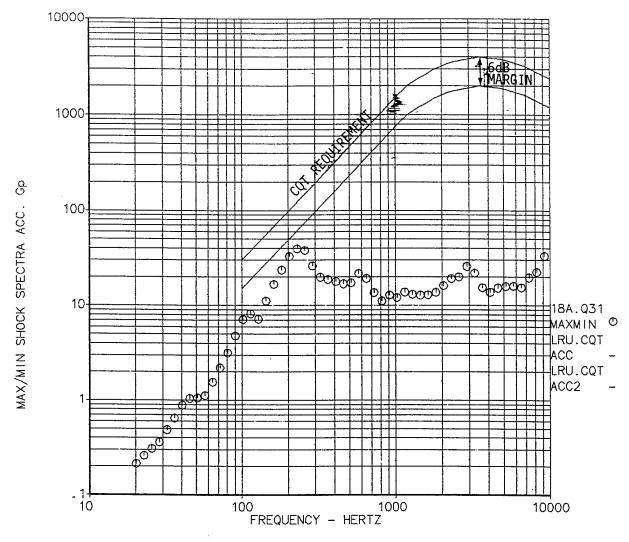


28-MAY-82 15:47:45

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CALC	28MAY82	REVISED	DATE	Comparison of component shock	Acc 18T
CHECK				environment with component	
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 138
				THE DULTING COMI AINT	
			<u> </u>	D290-75303-2 Vol. II	

FIGURE 2-131 SHOCK SPECTRA (Q = .10) H18A QTV PYROSHOCK TEST 3 PULSE 1

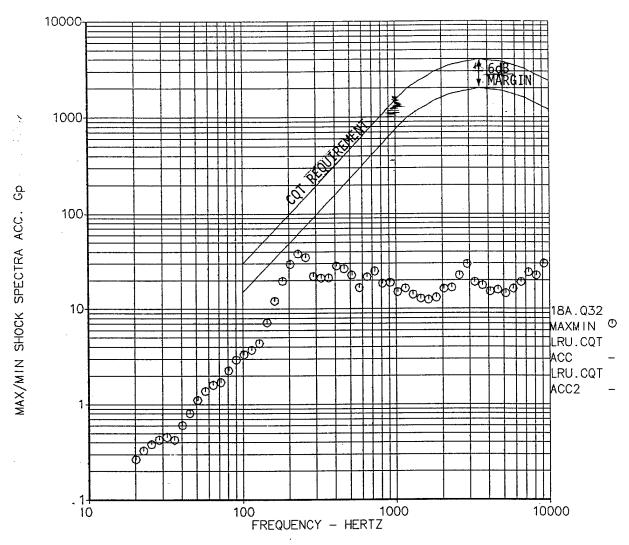


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APPD.				THE BOEING COMPANY	PAGE 139

FIGURE 2-132 SHOCK SPECTRA (Q = 10) H18A QTV PYROSHOCK TEST 3 PULSE 2

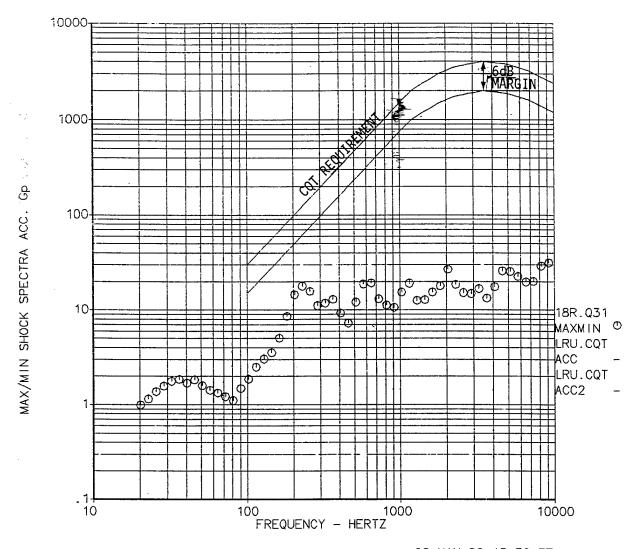


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CHECK				environment with component Test Requirement	
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY PAGE 140	
				THE DOLING COMEANT AND	

FIGURE 2-133
SHOCK SPECTRA (Q = 10)
H18R QTV PYROSHOCK TEST 3 PULSE 1

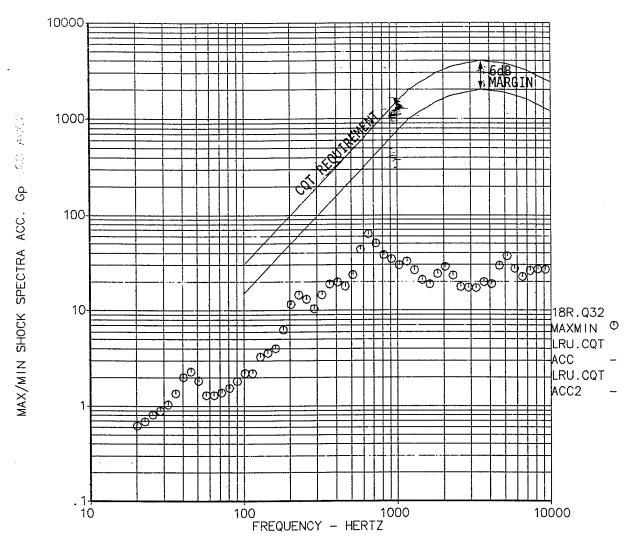


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CHECK				environment with component	7100 1010
APPD.				Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 141
				THE DUETNG CUMPANT	
				D290-75303-2 Vol. II	

FIGURE 2-134
SHOCK SPECTRA (Q = 10)
H18R QTV PYROSHOCK TEST 3 PULSE 2

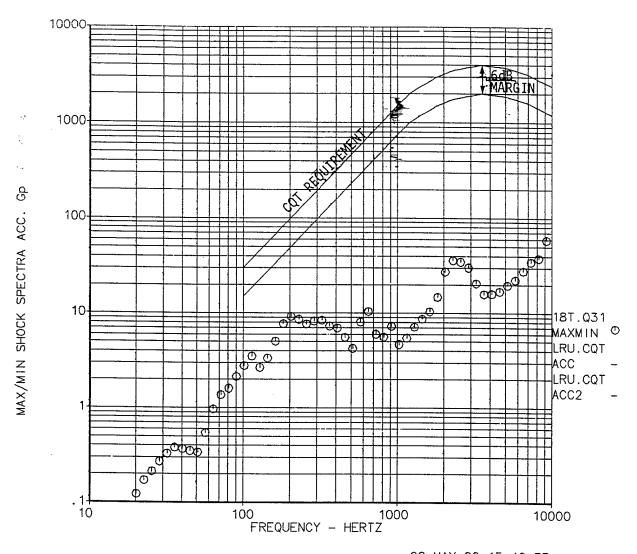


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CHECK		<u> </u>		environment with component	7.0 4 7 2.1
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 142
				THE DUETING COMPAINT	

FIGURE 2-135 SHOCK SPECTRA (Q = 10) H18T QTV PYROSHOCK TEST 3 PULSE 1

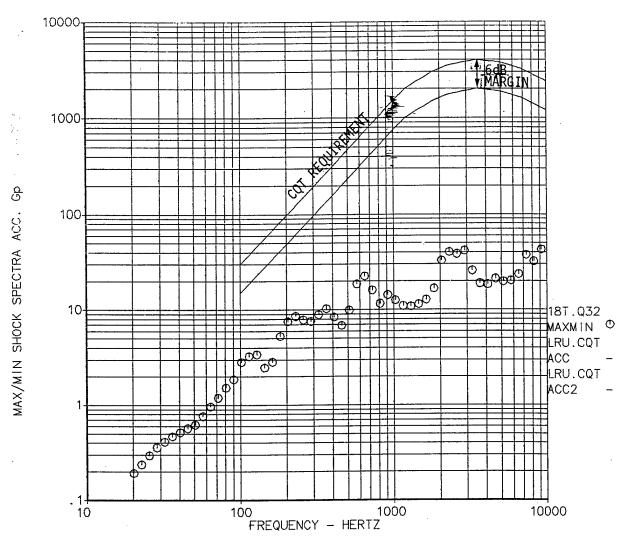


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CHECK				environment with component	Acc 18T
APPD.				environment with component Test Requirement	
APPD.				THE DOELLIO COMPANY	PAGE 143
				THE BOEING COMPANY	11102 173

FIGURE 2-136 SHOCK SPECTRA (Q = .10) H18T QTV PYROSHOCK TEST 3 PULSE 2

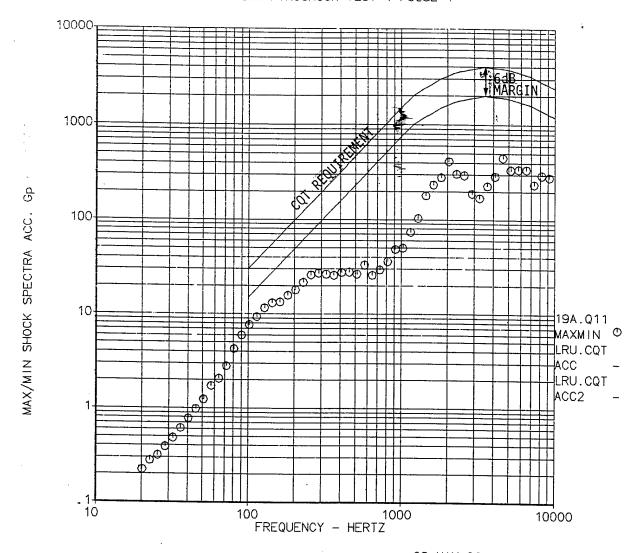


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APPD.				THE BOEING COMPANY	PAGE 144
	<u></u>			D290-75303-2 Vol. II	

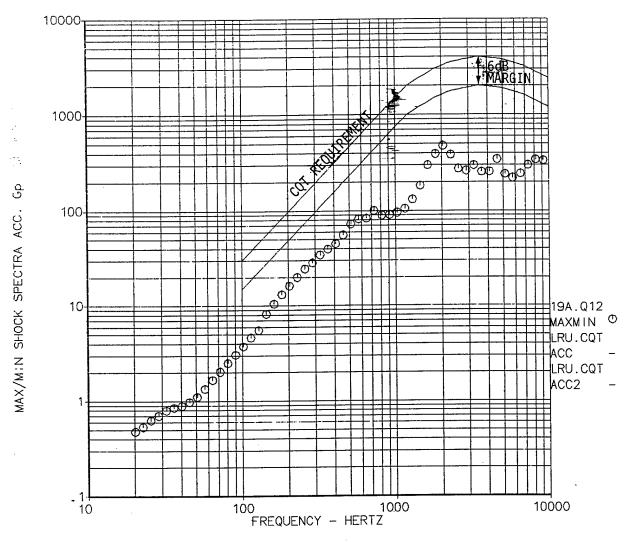
FIGURE 2-137 SHOCK SPECTRA (Q = .10) H19A QTV PYROSHOCK TEST 1 PULSE 1



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CHECK				environment with component	Acc 19A
APPD.		Ì		environment with component Test Requirement	
APPD.				THE DOELLIO COLIDIAN	PAGE 145
				THE BOEING COMPANY	11.00 145

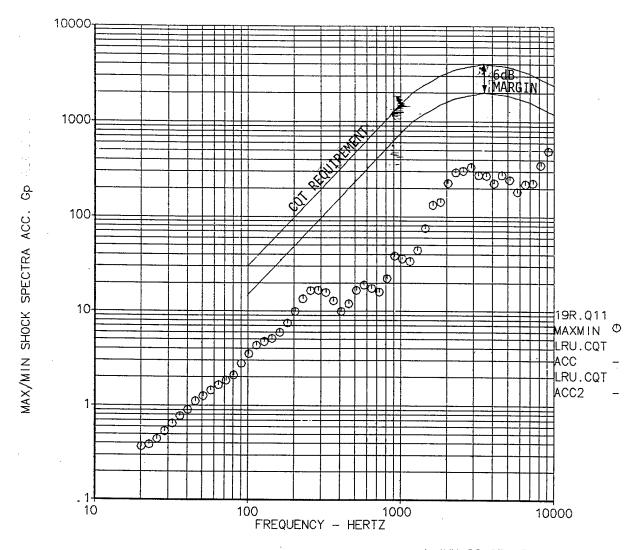
FIGURE 2-138
SHOCK SPECTRA (Q = 10)
H19A QTV PYROSHOCK TEST 1 PULSE 2



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APPD.				Test Requirement THE BOFING	COMPANY	 PAGE 146
				D290-75303-2 Vol. II	001111 711 11	

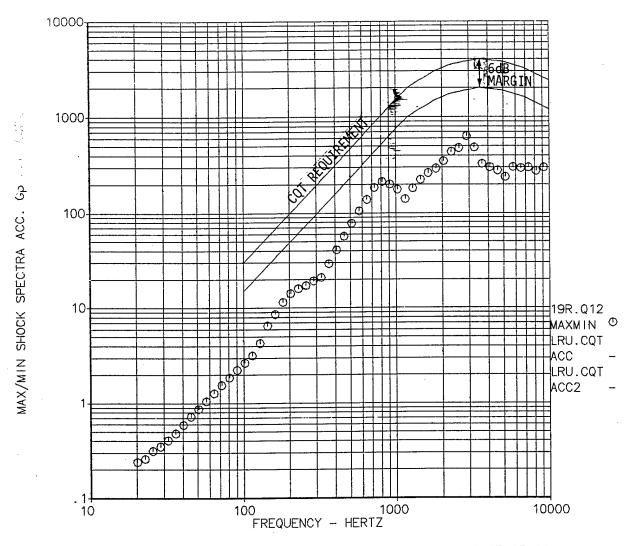
FIGURE 2-139
SHOCK SPECTRA (Q = 10)
H19R QTV PYROSHOCK TEST 1 PULSE 1



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CHECK				environment with component	ACC 19R
APPD.		1		Test Requirement	
APPD.				THE DOELLIA CONDAINA	PAGE 147
				THE BOEING COMPANY	11102 147

FIGURE 2-140 SHOCK SPECTRA (Q = 10)
H19R QTV PYROSHOCK TEST 1 PULSE 2

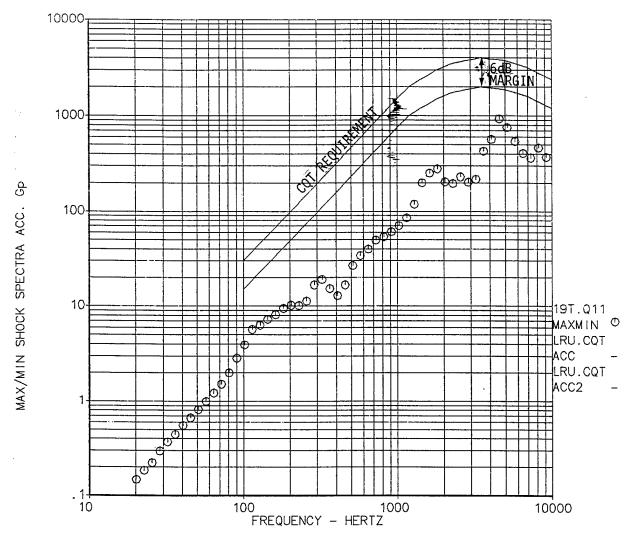


1-JUN-82 07:43:41

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CHECK		<u> </u>		environment with component Test Requirement	
APPD.		[Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 148
				THE DOLLING COMMANT	

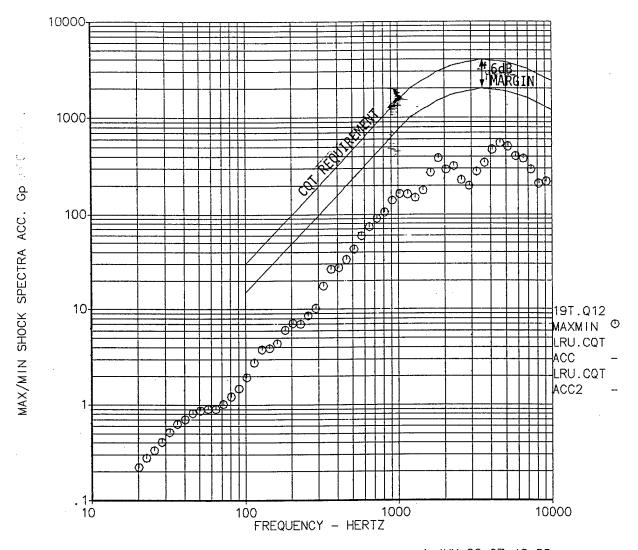
FIGURE 2-141
SHOCK SPECTRA (Q = 10)
H19T QTV PYROSHOCK TEST 1 PULSE 1



1-JUN-82 07:48:18

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19T
CHECK			1	environment with component	ACC 131
APPD.				Test Requirement	
APPD.				THE DOEING COMPANY	PAGE 149
				HE BOLING COMPANY	
		 		D290-75303-2 Vol. II	

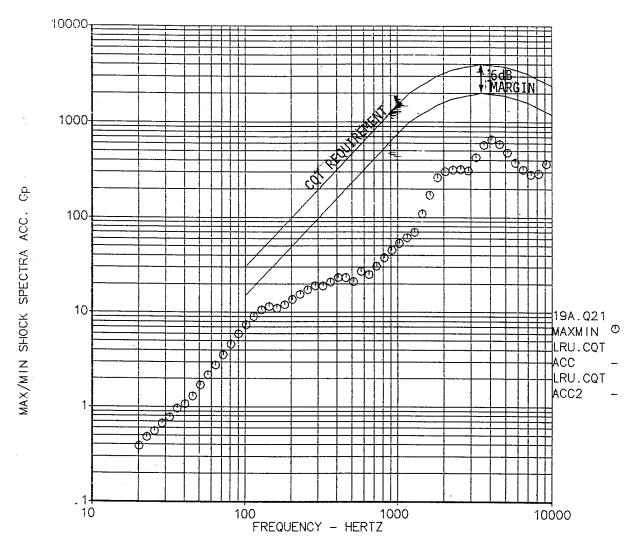
FIGURE 2-142 SHOCK SPECTRA (Q = 10) H19T QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 07:48:55

CALC	1JUN82	REVISED	DATE	Comparison of component shock Acc 19T
CHECK			ļ <u>.</u>	environment with component Test Requirement
APPD.				
APPD.		<u> </u>	<u> </u>	THE ROFING COMPANY PAGE 150
- 1				THE DUETTIO COMITAINT -> 1
	•			D290-75303-2 Vol. II

FIGURE 2-143
SHOCK SPECTRA (Q = 10)
H19A QTV PYROSHOCK TEST 2 PULSE 1

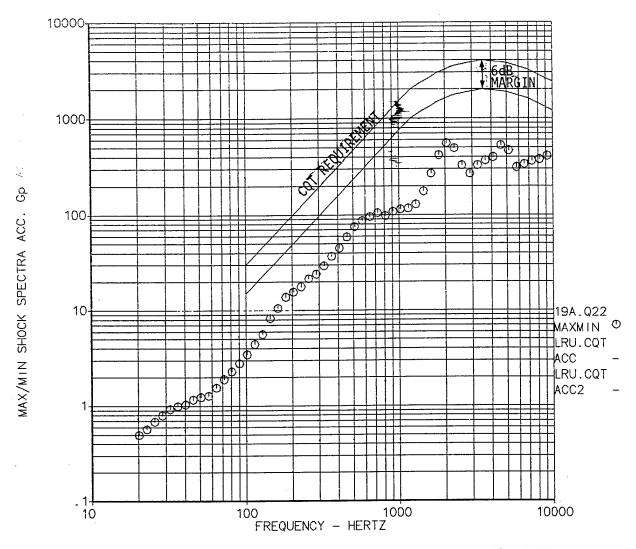


1-JUN-82 07:40:14

PSU

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19A
APPD.				environment with component Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 151
			<u> </u>	D290-75303-2 Vol. II	

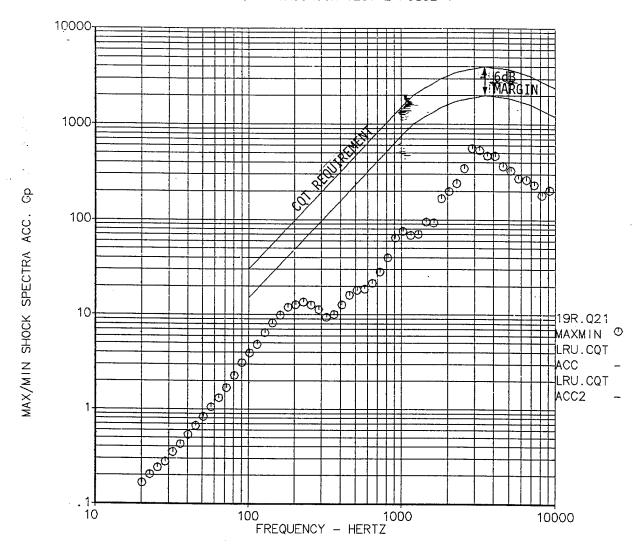
FIGURE 2-144 SHOCK SPECTRA (Q = 10) H19A QTV PYROSHOCK TEST 2 PULSE 2



1-JUN-82 07:40:53

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19A
CHECK				environment with component	
APPD.		1		Test Requirement	
APPD.		1		THE ROFING COMPANY	PAGE 152
		1		LITE DUE THE COMPANY	
		1		D290-75303-2 Vol. II	

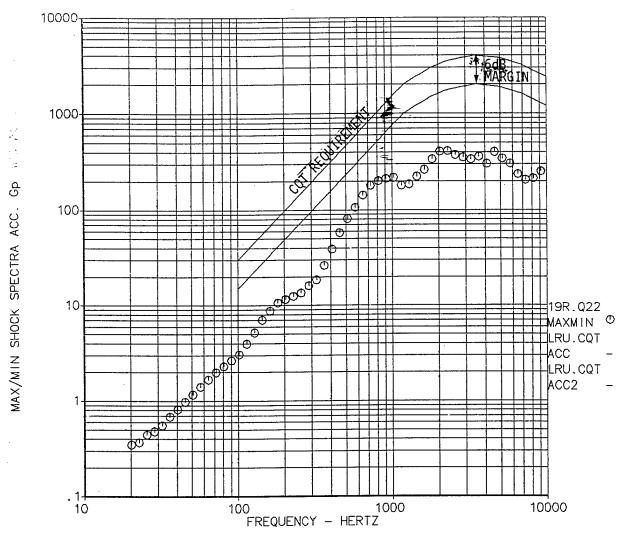
FIGURE 2-145
SHOCK SPECTRA (Q = 10)
H19R QTV PYROSHOCK TEST 2 PULSE 1



1-JUN-82 07:44:20

CALC	1JUN82	REVISED.	DATE	Comparison of component shock	Acc 100
CHECK				environment with component	Acc 19R
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 153
				I THE DUETING CUMPAINT :	100
				D290-75303-2 Vol. II	

FIGURE 2-146 SHOCK SPECTRA (Q = 10) H19R QTV PYROSHOCK TEST 2 PULSE 2

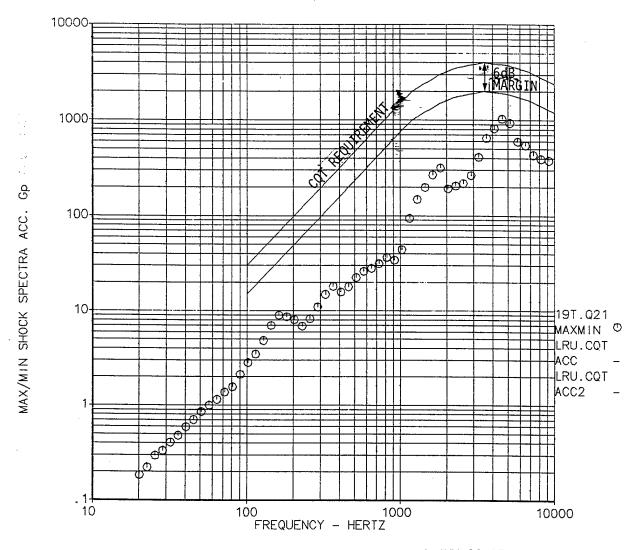


1-JUN-82 07:45:19

PSU

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19R
APPD.				environment with component Test Requirement	
APPD.					PAGE 154
		1	1 1	THE DOCTING COMMENTS	

FIGURE 2-147
SHOCK SPECTRA (Q = 10)
H19T QTV PYROSHOCK TEST 2 PULSE 1

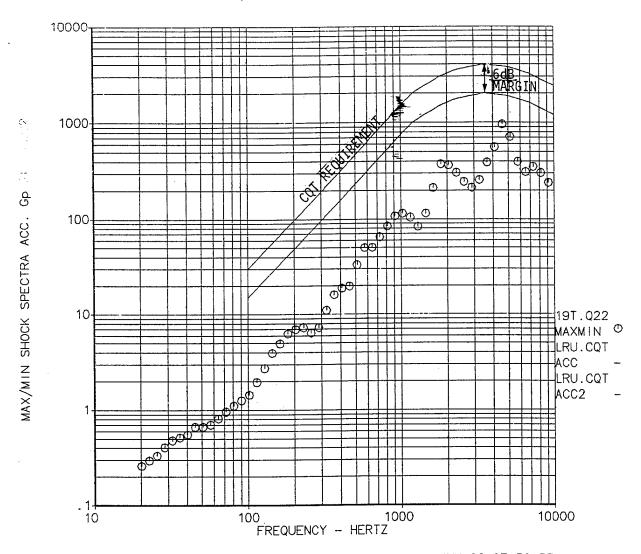


1-JUN-82 07:49:51

PSU.

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19T
APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 155
		1		D290-75303-2 Vol. II	

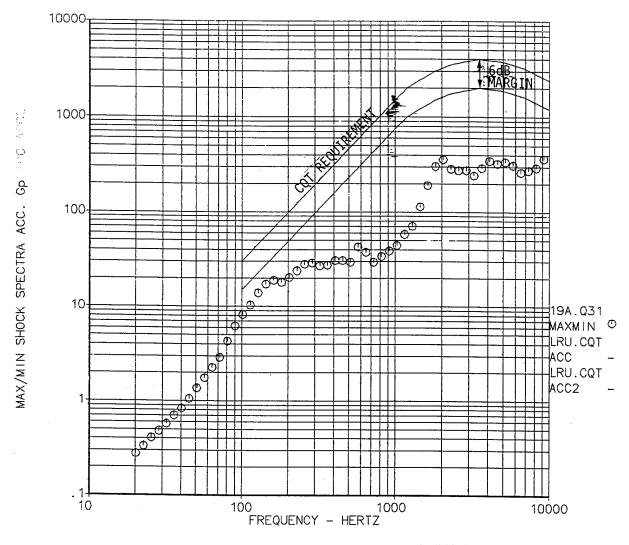
FIGURE 2-148
SHOCK SPECTRA (Q = 10)
H19T QTV PYROSHOCK TEST 2 PULSE 2



1-JUN-82 07:50:33

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19T
CHECK				environment with component	/// /
APPD.				Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 156
			<u> </u>	THE DOLLING COMEANY	
				D290-75303-2 Vol. II	· 4.4.

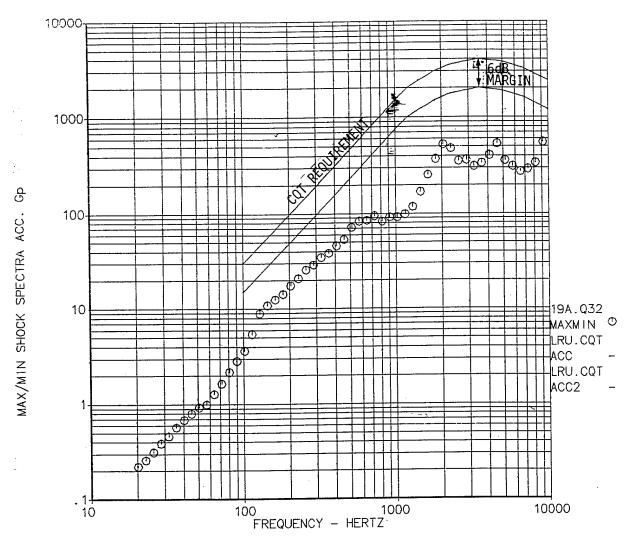
FIGURE 2-149 SHOCK SPECTRA (Q = 10)
H19A QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 07:41:47

CALC	1JUN82	REVISED	DATE	Comparison of component shock	100
CHECK		-		environment with component	Acc 19A
APPD.				Test Requirement	
APPD.				THE DOELLIG COMBANIA	PAGE 157
				THE BOLING COMPANY	1

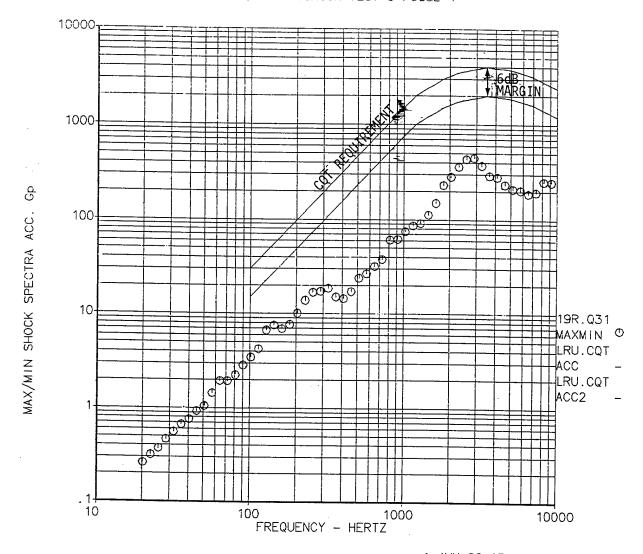
FIGURE 2-150 SHOCK SPECTRA (Q = 10) H19A QTV PYROSHOCK TEST 3 PULSE 2



1-JUN-82 07:42:27

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19A
CHECK				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 158
			<u> </u>	D290-75303-2 Vol. II	

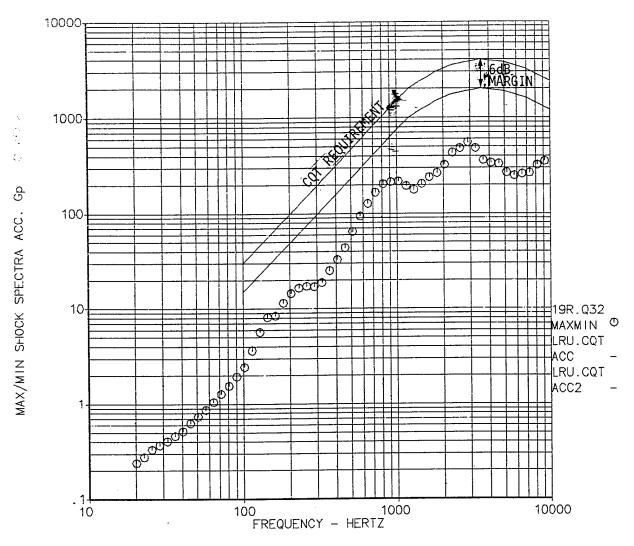
FIGURE 2-151 SHOCK SPECTRA (Q = 10) H19R QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 07:46:56

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 19R
APPD.				THE BOEING COMPANY	PAGE 159

FIGURE 2-152 SHOCK SPECTRA (Q = 10) H19R QTV PYROSHOCK TEST 3 PULSE 2

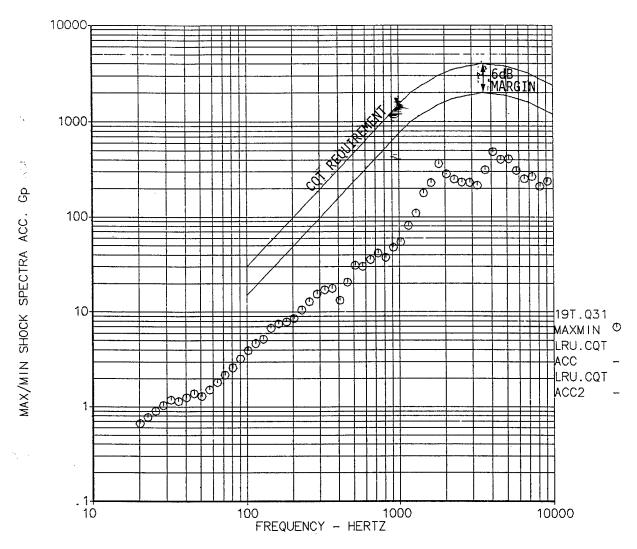


1-JUN-82 07:47:49

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CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19R
CHECK				environment with component Test Requirement	
APPD.				lest kequirement	
APPD.				THE ROFING COMPANY	PAGE 160
				LIL DOLING COMITAIN	

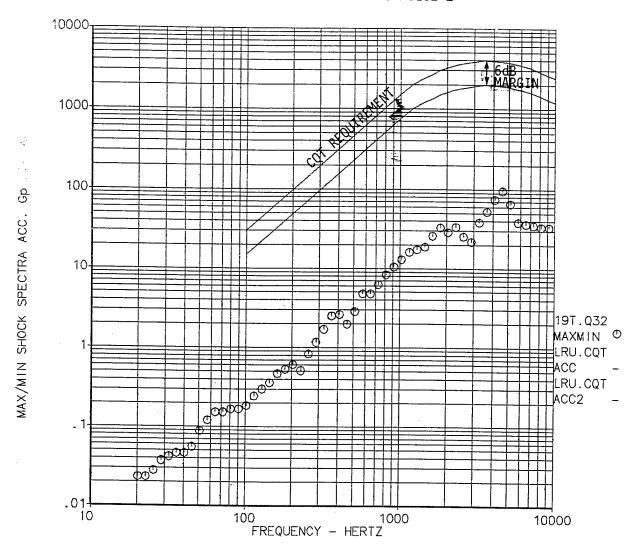
FIGURE 2-153 SHOCK SPECTRA (Q = 10) H19T QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 07:51:33

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19T
CHECK		1		environment with component	7,00 131
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 161
				I THE DUE ING COMPANT	
				D290-75303-2 Vol. II	

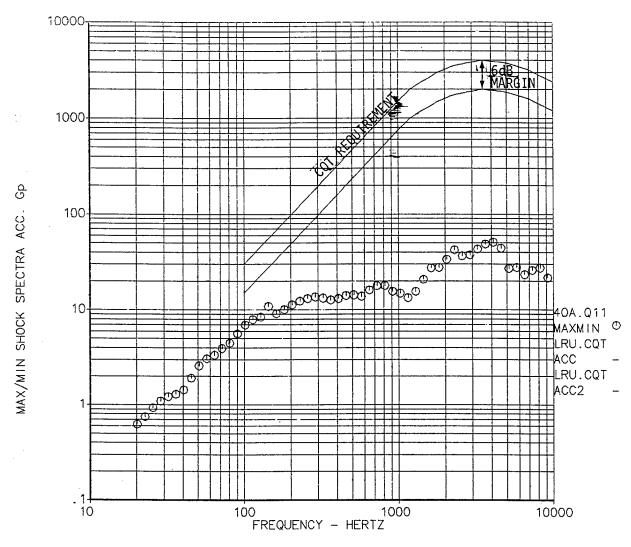
FIGURE 2-154
SHOCK SPECTRA (Q = 10)
H19T QTV PYROSHOCK TEST 3 PULSE 2



1-JUN-82 07:52:26

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock	Acc 19T
APPD.				environment with component Test Requirement	131
APPD.				THE BOEING COMPANY	PAGE 162
			1	D290-75303-2 Vol. II	

FIGURE 2-155: SHOCK SPECTRA (Q = 10) H40A QTV PYROSHOCK TEST 1 PULSE 1

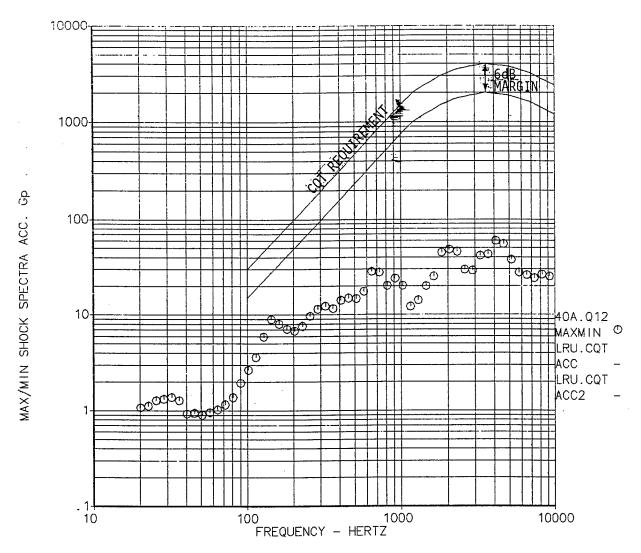


1-JUN-82 07:54:39

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40A
CHECK				environment with component	ACC 4UA
APPD.		1		environment with component Test Requirement	İ
APPD.				THE DOELNO COMPANY "	PAGE 163
				THE BOFING COMPANY	-

FIGURE 2-156 SHOCK SPECTRA (0 = 10) H40A QTV PYROSHOCK TEST 1 PULSE 2

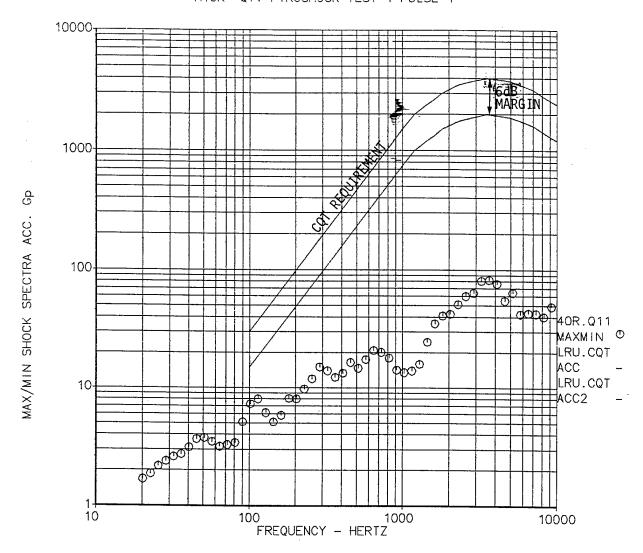


1-JUN-82 07:55:42

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40A
CHECK				environment with component	ACC TON
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 164
				, THE DULTING COMMERNI	
	 			D200575303-2 Vol. II.	

FIGURE 2-157
SHOCK SPECTRA (Q = 10)
H40R QTV PYROSHOCK TEST 1 PULSE 1

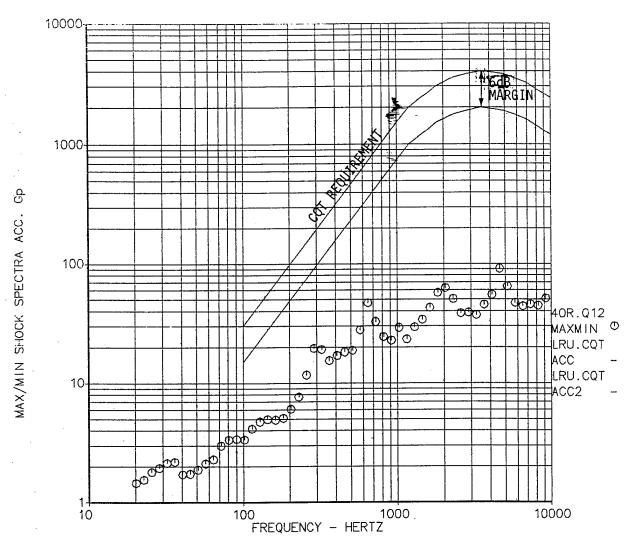


1-JUN-82 07:59:17

POWER AMP B

CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 40R
APPD.				THE BOEING COMPANY	PAGE 165
				D290-75303-2 Vol. II	

FIGURE 2-158
SHOCK SPECTRA (Q = 10)
H40R QTV PYROSHOCK TEST 1 PULSE 2

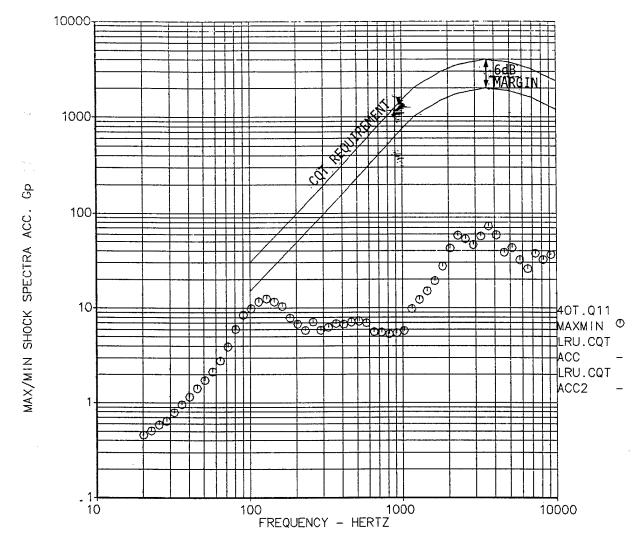


1-JUN-82 07:59:56

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock environment with component	Acc 40R
APPD.		 		Test Requirement	· .
APPD.				THE BOEING COMPANY	PAGE 166

FIGURE 2-159
SHOCK SPECTRA (Q = 10)
H4OT QTV PYROSHOCK TEST 1 PULSE 1

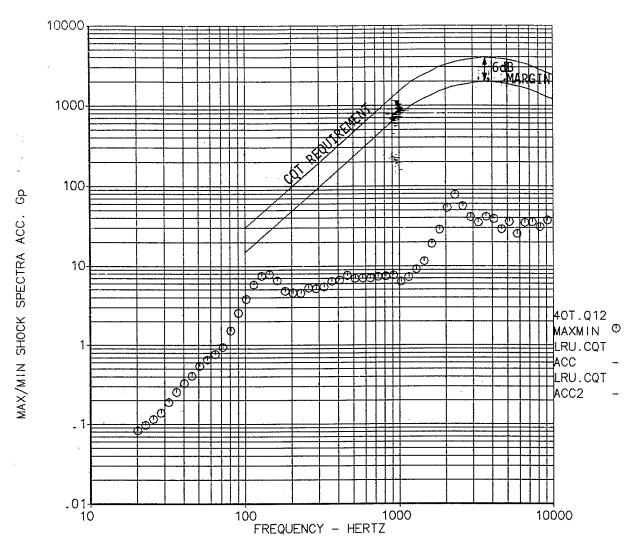


1-JUN-82 08:04:52

POWER AMP. B

GALC	1JUN82	REVISED .	DATE	Comparison of component shock	Acc 40T
CHECK				environment with component	7100 401
APPD.				Test Requirements	
APPD.				THE BOFING COMPANY	PAGE 167
				THE DULTING COMPANT	

FIGURE 2-160 SHOCK SPECTRA (Q = 10) H4OT QTV PYROSHOCK TEST 1 PULSE 2

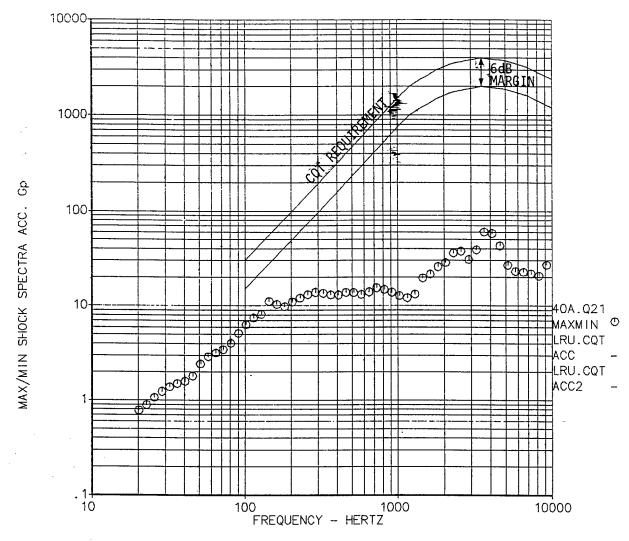


1-JUN-82 08:05:36

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40T
CHECK				environment with component	7.00 101
APPD.				Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 168
				THE DULTING COMEANT A	, , , , , , , , , , , , , , , , , , , ,

FIGURE 2-161 SHOCK SPECTRA (Q = 10) H40A QTV PYROSHOCK TEST 2 PULSE 1

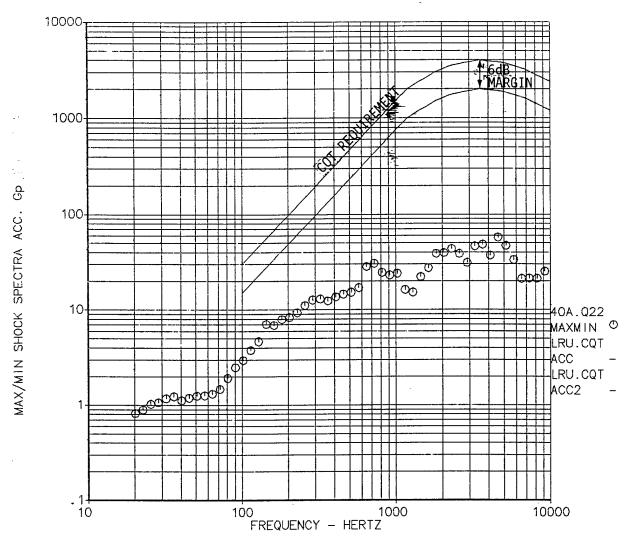


1-JUN-82 07:56:28

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40A
CHECK				environment with component	ACC TOA
APPD.				Test Requirement	
APPD.				F. IE 6 6 1 1 1 9 9 9 9 1 1 1 1 1 1	PAGE 169
				THE BOEING COMPANY	

FIGURE 2-162 SHOCK SPECTRA (Q = 10) H40A QTV PYROSHOCK TEST 2 PULSE 2

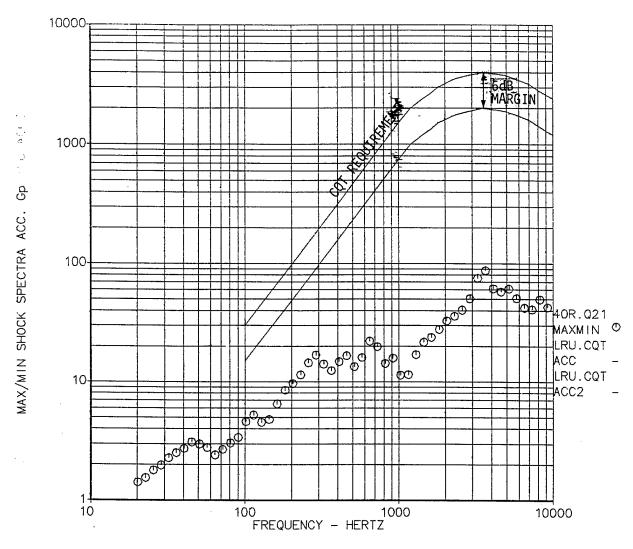


1-JUN-82 07:57:17

POWER AMP B

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component show environment with component Test Requirement	ck	Acc 40A
APPD.				THE BOEING COMPANY	· 11.	PAGE 170
·		·		D290-75303-2 Vol. 11		

FIGURE 2-163
SHOCK SPECTRA (Q = 10)
H40R QTV PYROSHOCK TEST 2 PULSE 1

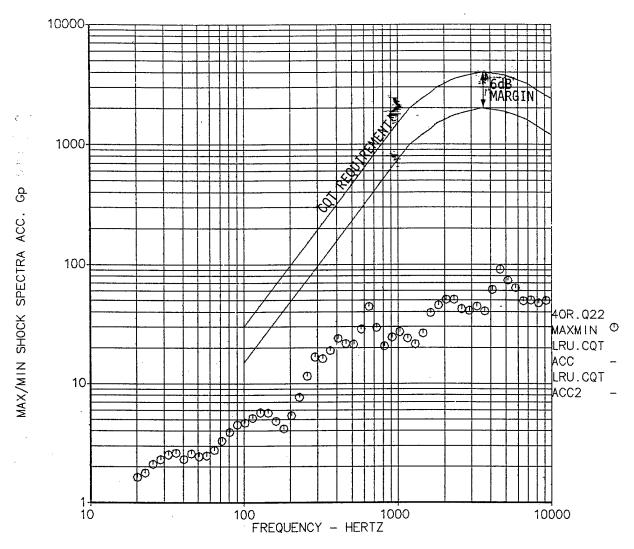


1-JUN-82 08:02:01

POWER AMP B.

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40R
CHECK	1			environment with component	ACC 40K
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 171
				THE BUEING CUMPANT	171
				D290-75303-2 Vol. II	

FIGURE 2-164.
SHOCK SPECTRA (Q = 10)
H40R QTV PYROSHOCK TEST 2 PULSE 2

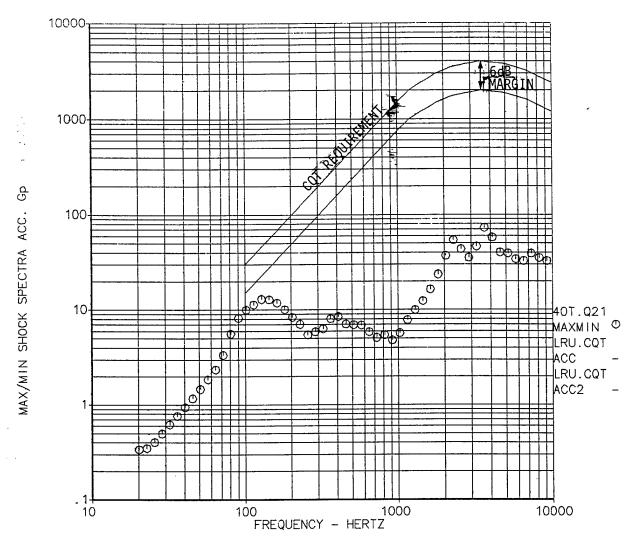


1-JUN-82 08:02:40

: POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40R
CHECK				environment with component	7100 7010
APPD.			İ	Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 172
				- ITE DOLING COMEANT WAY	
	*			D290-75303-2 Vol. II	
				the second secon	:

FIGURE 2-165 SHOCK SPECTRA (Q = 10) H40T QTV PYROSHOCK TEST 2 PULSE 1

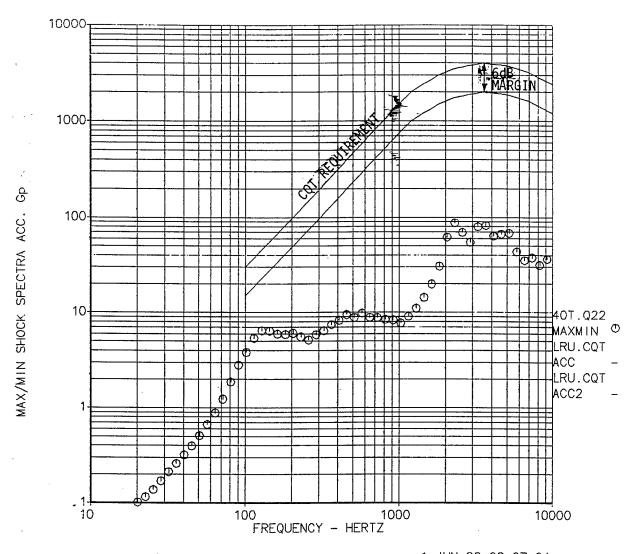


1-JUN-82 08:06:21

POWER AMP B

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock environment with component	Acc 40T
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 173
	1			THE DOLLING COMM FIRM	

FIGURE 2-166 SHOCK SPECTRA (Q = 10) H4OT QTV PYROSHOCK TEST 2 PULSE 2

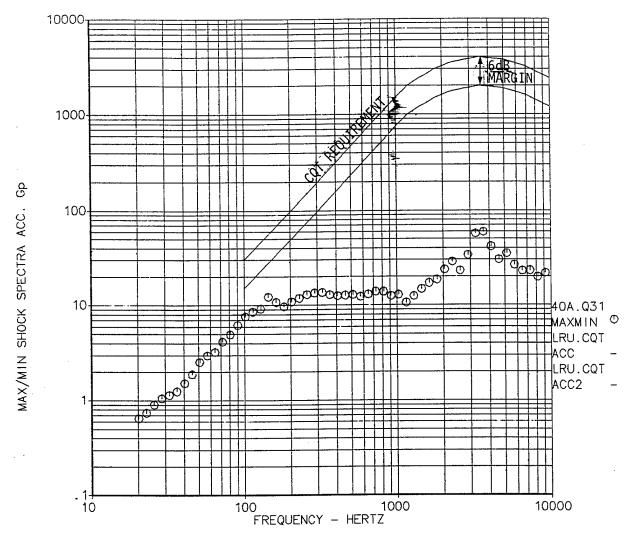


1-JUN-82 08:07:04

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40T
CHECK	1			environment with component	700 401
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 174
			-		
				0290-75303-2 Vol II	

FIGURE 2-167
SHOCK SPECTRA (Q = 10)
H40A QTV PYROSHOCK TEST 3 PULSE 1

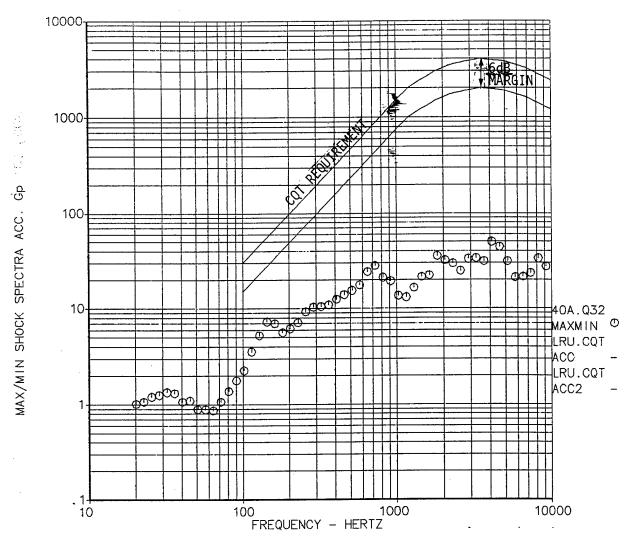


1-JUN-82 07:57:57

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40A
CHECK				environment with component Test Requirement	100
APPD.		<u> </u>		Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 175
				THE DOLING COMI AIVI	
				D290-75303-2 Vol. II	

FIGURE 2-168
SHOCK SPECTRA (Q = 10)
H40A QTV PYROSHOCK TEST 3 PULSE 2

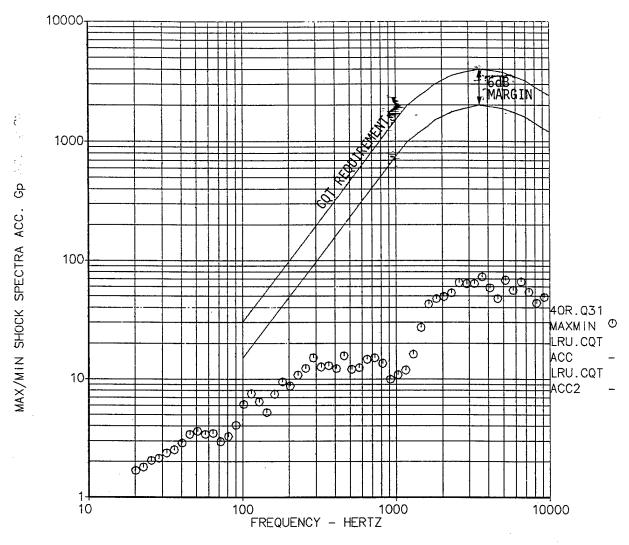


1-JUN-82 07:58:35

POWER AMP B

CALC CHECK	1JUN82	REVISED	DATE	environment with component	Acc 40A
APPD.	1 1	ŀ		Test Requirement	
APPD.				THE BOFING COMPANY PM	GE 176

FIGURE 2-169 SHOCK SPECTRA (Q = 10) H4OR QTV PYROSHOCK TEST 3 PULSE 1

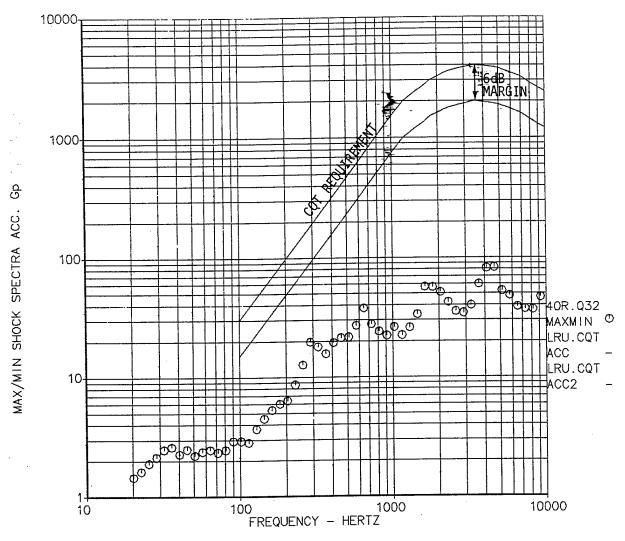


1-JUN-82 08:03:30

POWER AMP: B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40R
CHECK	1	1		environment with component	ACC TON
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 177
				THE DUE TING COMPAINT A	
				0290-75303-2 Vol. II	

FIGURE 2-170 SHOCK SPECTRA (Q = 10) H40R QTV PYROSHOCK TEST 3 PULSE 2

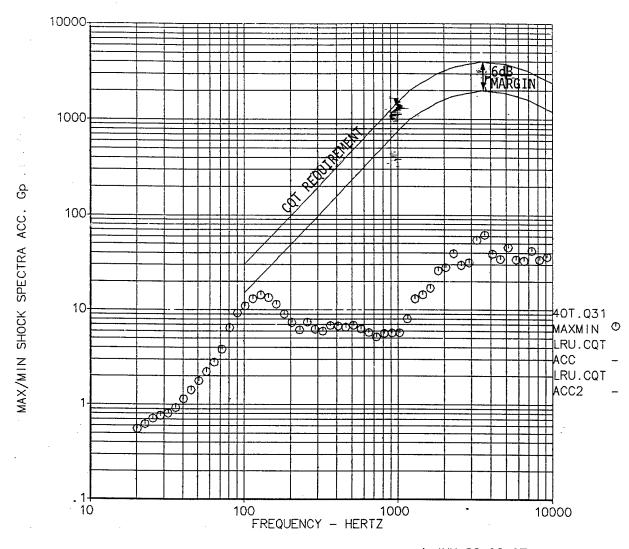


1-JUN-82 08:04:08

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40R
CHECK APPD.		_		environment with component Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 178
	1 1		1	THE DOLLING COMMITMEN	

FIGURE 2-171 SHOCK SPECTRA (Q = 10) H4OT QTV PYROSHOCK TEST 3 PULSE 1

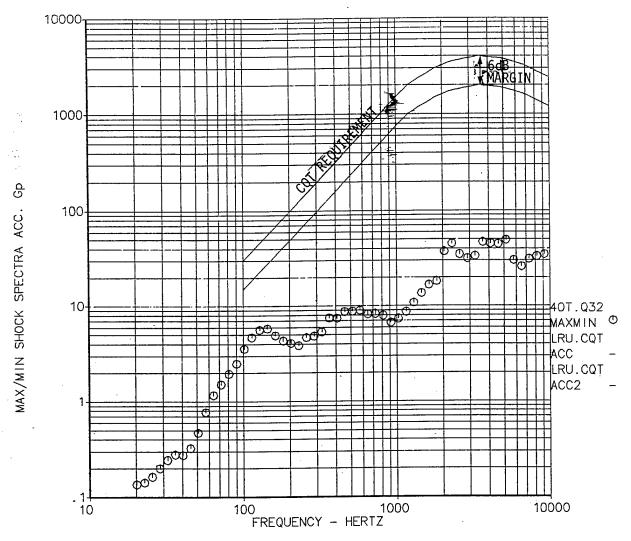


1-JUN-82 08:07:44

POWER AMP B

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 40T
APPD.				THE BOEING COMPANY	PAGE 179
				D290-75303-2 Vol. II	

FIGURE 2-172
SHOCK SPECTRA (Q = 10)
H40T QTV PYROSHOCK TEST 3 PULSE 2

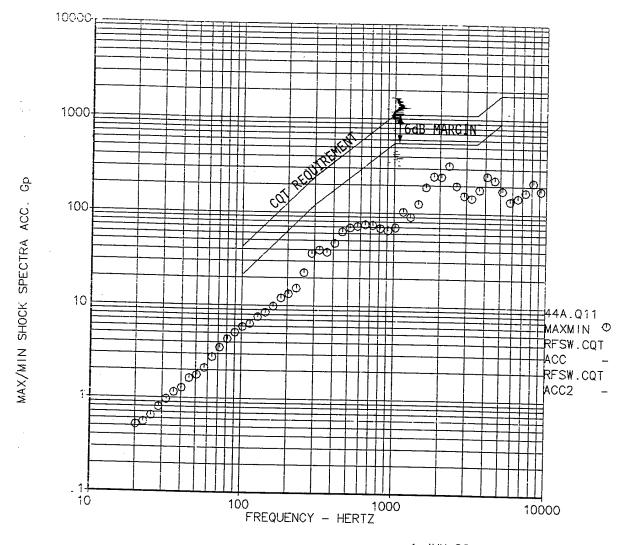


1-JUN-82 08:08:24

POWER AMP B

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 40T
CHECK				environment with component Test Requirement	
APPD.					PAGE 180
7015.				THE BOLING COMPANY	700
				D290÷75303-2 Vol. II	***

FIGURE 2-173
SHOCK SPECTRA (Q = 10)
H44A QTV PYROSHOCK TEST 1 PULSE 1

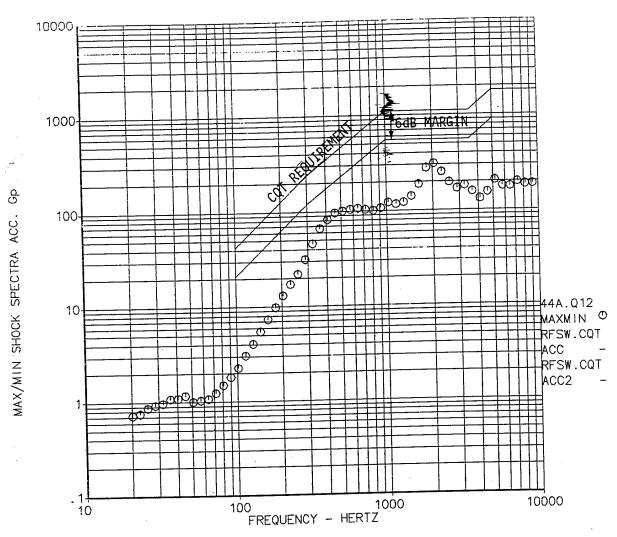


1-JUN-82 10:26:05

RF SWITCH

CALC 1JUN82 RE	EVISED DATE	Comparison of company	
CHECK		Comparison of component shock environment with component	Acc 44A
APPD.		Test Requirement	
APPD.		THE DOE IND COMPANY	PAGE 181
		D290-75303-2 Vol II	

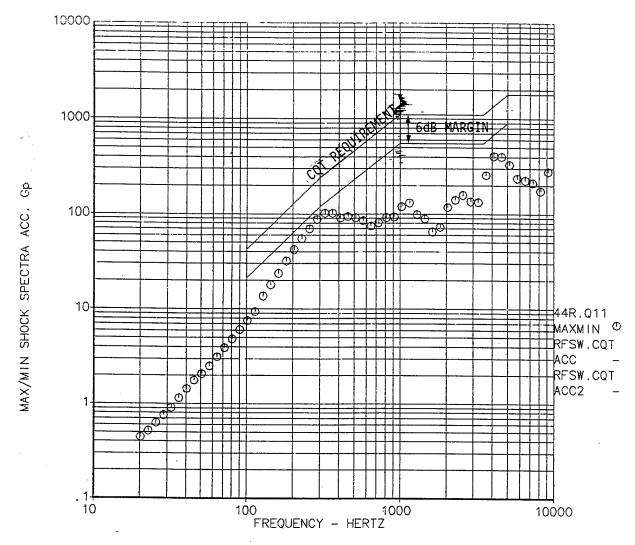
FIGURE 2-174, SHOCK SPECTRA (Q = 10) H44A QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 10:27:20

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44A
CHECK				environment with component Test Requirement	
APPD.	1			THE BOFING COMPANY	PAGE 182
APPU.	1			LIIL DOLING COM TACE	
				0290- 75 303-2 Vol. II	se je

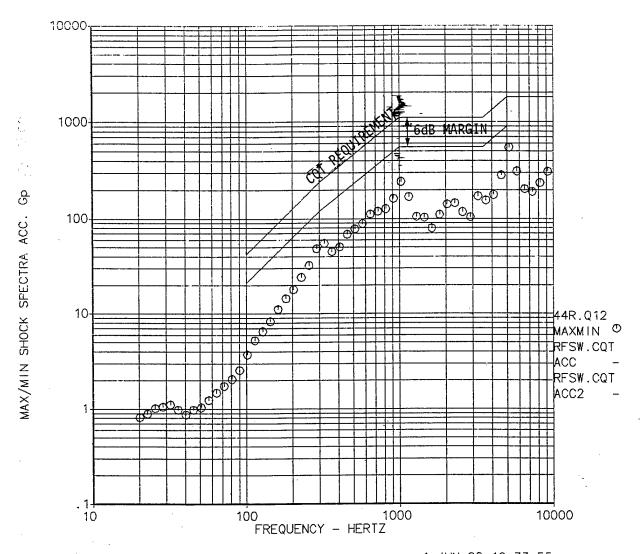
FIGURE 2-175 SHOCK SPECTRA (Q = 10) H44R QTV PYROSHOCK TEST 1 PULSE 1



1-JUN-82 10:32:34

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44R
APPD.			ļ	environment with component Test Requirement	ACC 44K
APPD.				THE DOCINO CONDING	PAGE 183
				THE BUEING COMPANY	1700 100
				D290+75303-2 Vol. II	

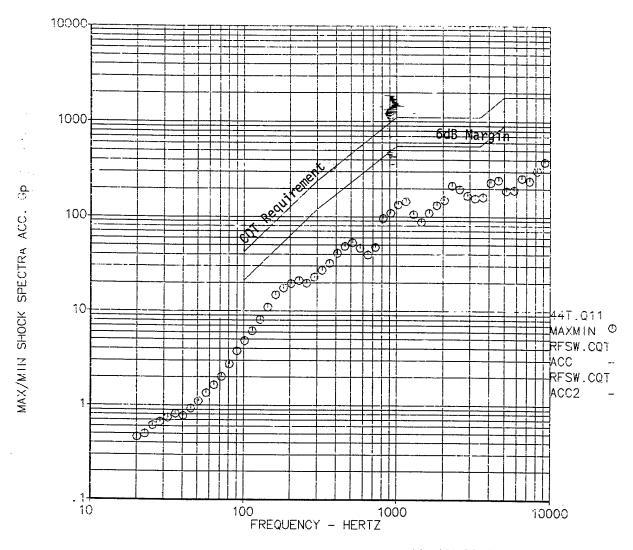
FIGURE 2-176 SHOCK SPECTRA (Q = 10) H44R QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 10:33:55

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component with com Test Requirement	ent shock ponent	Acc 44R
APPD.				THE BOEING COMP	PANY	AGE 184
			.	D290 <u>₹75</u> 303-2 Vol. II		, , , , , , ,

FIGURE 2-177
SHOCK SPECTRA (Q = 10)
H44T QTV PYROSHOCK TEST 1 PULSE 1

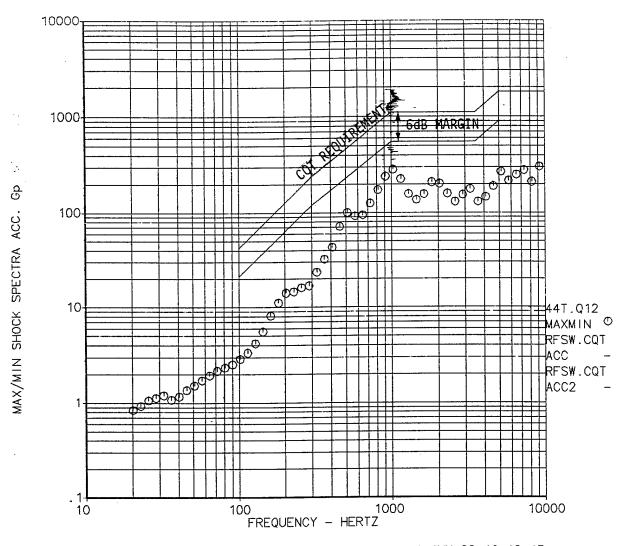


14-JUN-82 09:28:17

RF SWITCH

CALC	14JUN82	REVISED	DATE	Comparison of component shock	Acc 44T
CHECK APPD.		 	<u> </u>	environment with component Test Requirement	ACC 441
APPD.				THE BOEING COMPANY	PAGE 185
		<u> </u>	1	D290±75303-2 Vol. II	

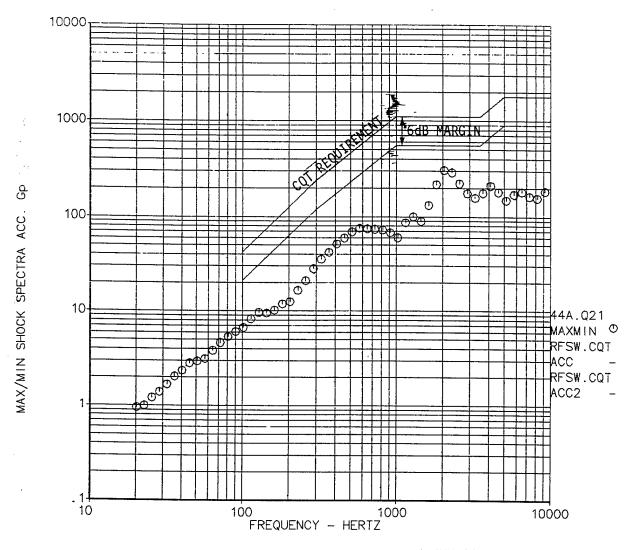
FIGURE 2-178
SHOCK SPECTRA (Q = 10)
H44T QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 10:42:43

CALC	1JUN82	REVISED	DATE	Comparison of compone	ent shock	Acc 44T
CHECK				environment with com	ponent	
APPD.				Test Requirement	•	
APPD.				THE BUEING CO	OMPANY	PAGE 186
				THE DOLLING OF	JIVII AINI -	
			***************************************	D290 ; 75303-2 Vol. II		

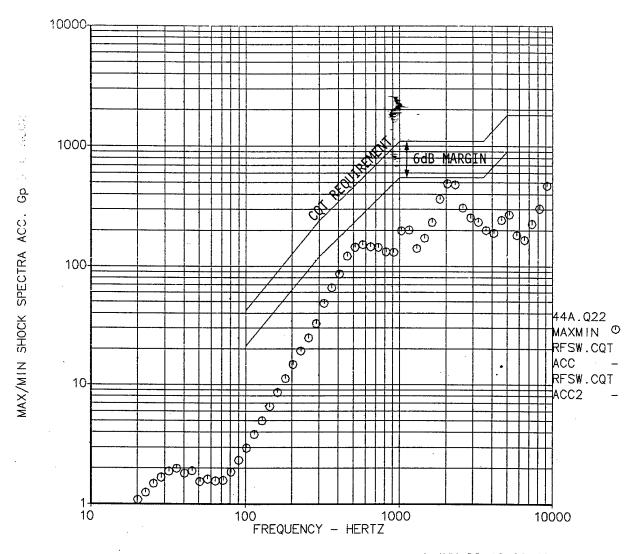
FIGURE 2-179
SHOCK SPECTRA (0 = 10)
H44A QTV PYROSHOCK TEST 2 PULSE 1



1-JUN-82 10:28:29

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44A
APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 187
				D290-75303-2 Vol. II	

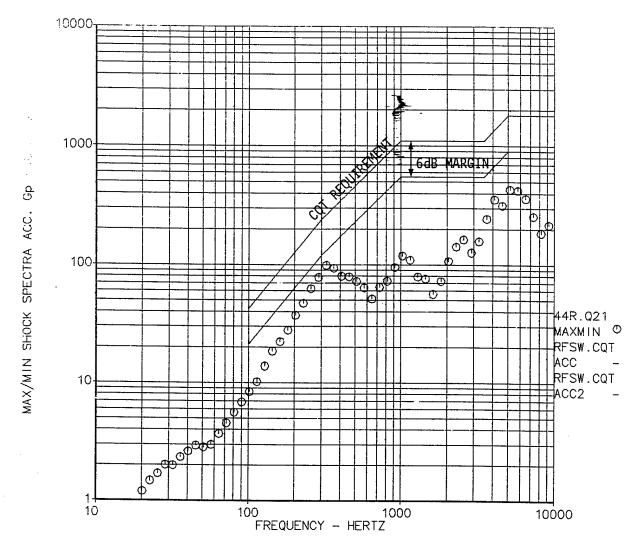
FIGURE 2-180 SHOCK SPECTRA (Q = 10) H44A QTV PYROSHOCK TEST 2 PULSE 2



1-JUN-82 10:29:49

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44A
CHECK	.	1		environment with component	700 447
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 188
				I THE DUELING CUMPAINT AND	1.00
				D290+75303-2 Vol. II	

FIGURE 2-181 SHOCK SPECTRA (Q = 10) H44R QTV PYROSHOCK TEST 2 PULSE 1

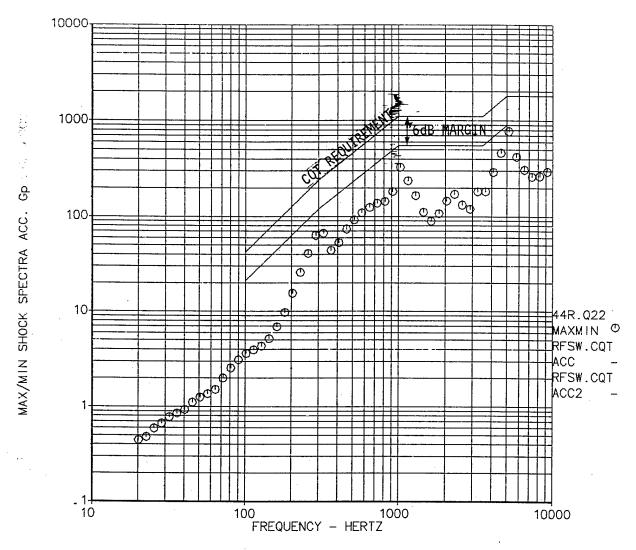


1-JUN-82 10:35:20

RF SWITCH

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 44R
APPD.				THE BOEING COMPANY	PAGE 189
		1		0290-75303-2 Vol. II	

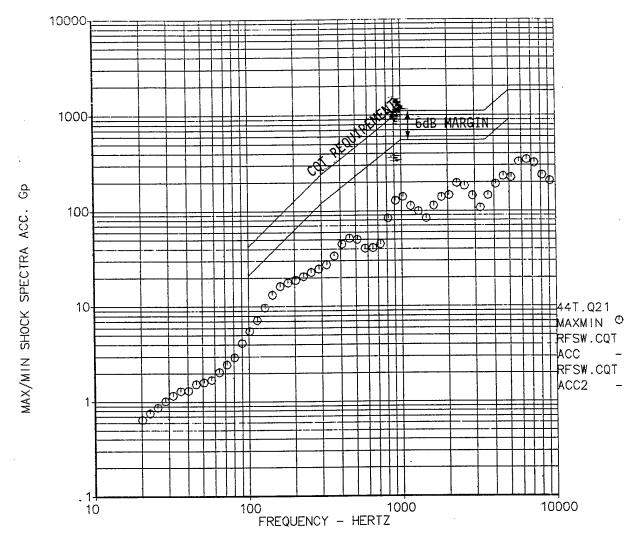
FIGURE 2-182 SHOCK SPECTRA (Q = 10) H44R QTV PYROSHOCK TEST 2 PULSE 2



1-JUN-82 10:36:52

CHECK-	1JUN82	REVISED	DATE	Comparison of component shock environment with component	Acc 44R
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 190
		<u> </u>		1. THE EDUCATION COMM THAT	
5.				D290-75303-2 Vol. II	

FIGURE 2-183 SHOCK SPECTRA (Q = 10) H44T QTV PYROSHOCK TEST 2 PULSE 1

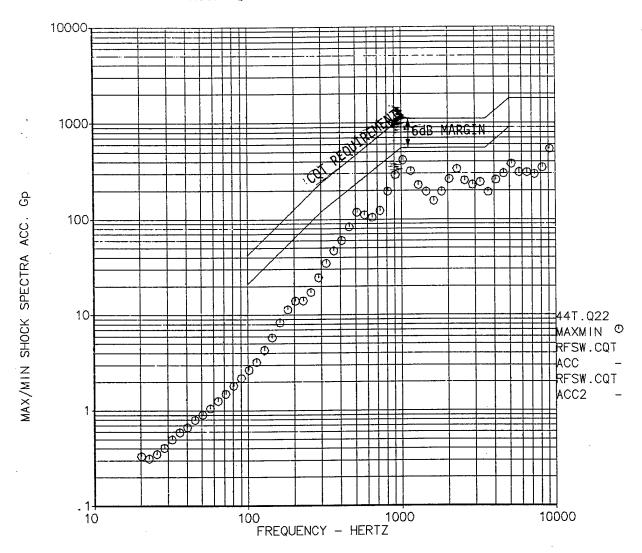


1-JUN-82 10:43:23

RF SWITCH

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44T
CHECK APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 191

FIGURE 2-184
SHOCK SPECTRA (Q = 10)
H44T QTV PYROSHOCK TEST 2 PULSE 2

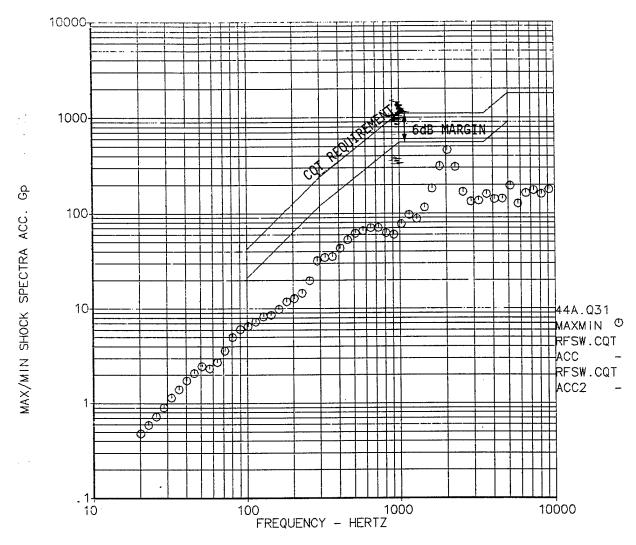


1-JUN-82 10:44:07

RF SWITCH

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44T
CHECK APPD.				environment with component Test Requirement	
APPD.				THE DOCINO COMPANY	PAGE 192
				THE BUETING COMPAINT	

FIGURE 2-185
SHOCK SPECTRA (Q = 10)
H44A QTV PYROSHOCK TEST 3 PULSE 1

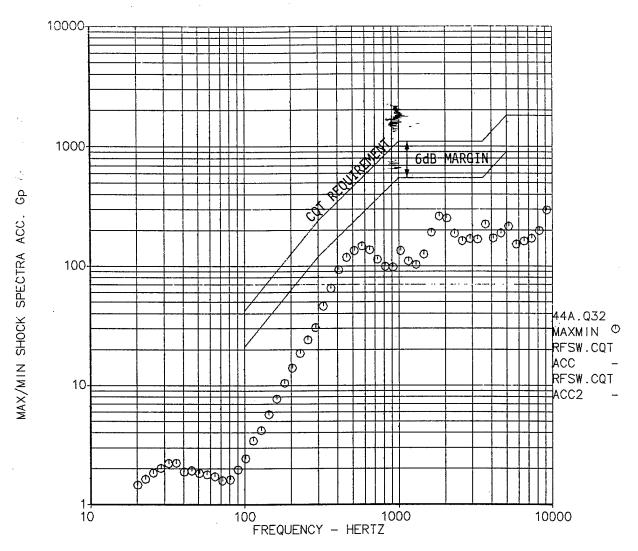


1-JUN-82 10:30:37

RF SWITCH

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44A
CHECK				environment with component	
APPD.		[Test Requirement	
APPD.				THE ROFING COMPANY	PAGE 193
				IN THE DULTING COMPANY	1:4

FIGURE 2-186 SHOCK SPECTRA (Q = 10) H44A QTV PYROSHOCK TEST 3 PULSE 2

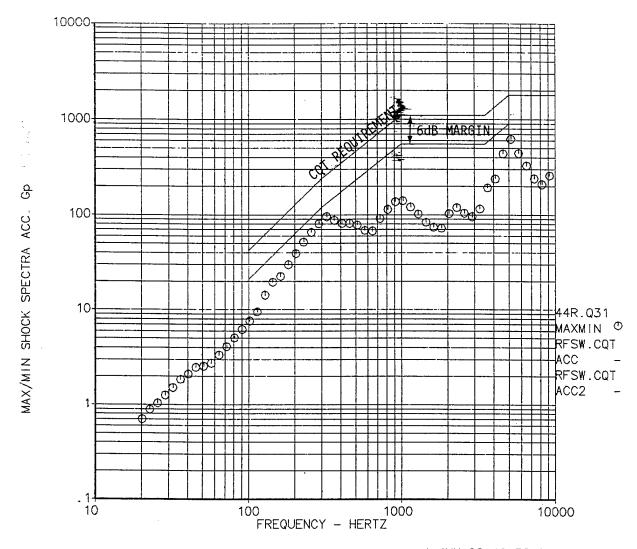


1-JUN-82 10:31:25

RF SWITCH

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock environment with component	Acc 44A
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 194
		[]	1 1	THE DOLLING COMMENTAL	

FIGURE 2-187
SHOCK SPECTRA (Q = 10)
H44R QTV PYROSHOCK TEST 3 PULSE 1

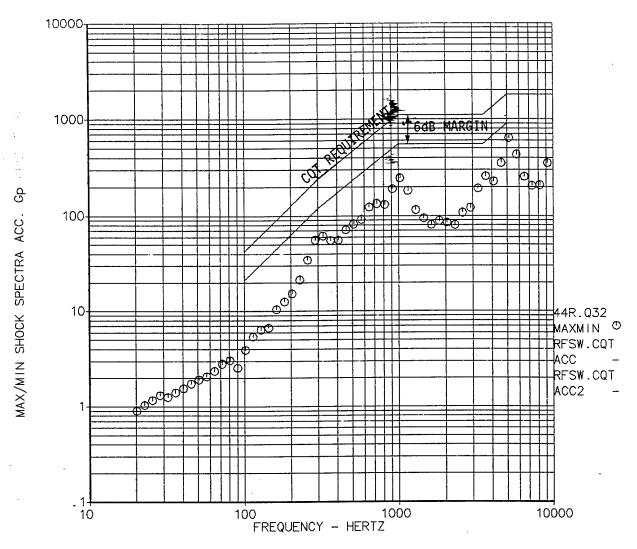


1-JUN-82 10:38:24

RF SWITCH

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44R
CHECK				environment with component	ACC 44K
APPD.				Test Requirement	
APPD.				THE DOELNO COMDANY	PAGE 195
				THE BOLING COMPANY	

FIGURE 2-188
SHOCK SPECTRA (Q = 10)
H44R QTV PYROSHOCK TEST 3 PULSE 2

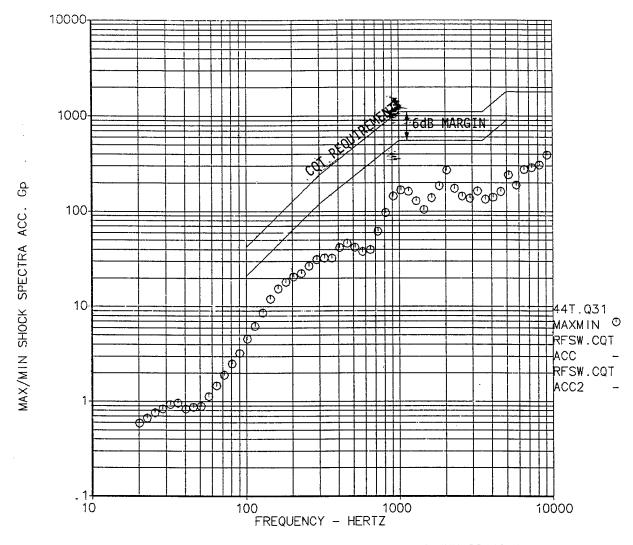


1-JUN-82 10:39:45

RF SWITCH

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44R
APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 196

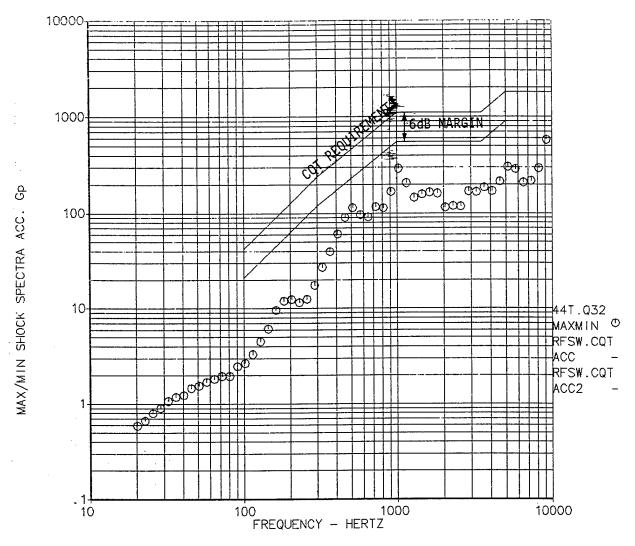
FIGURE 2-189 SHOCK SPECTRA (Q = 10) H44T QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 10:44:54

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44T
APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 197
				D290-75303-2 Vol. II	

FIGURE 2-190 SHOCK SPECTRA (Q = 10) H44T QTV PYROSHOCK TEST 3 PULSE 2

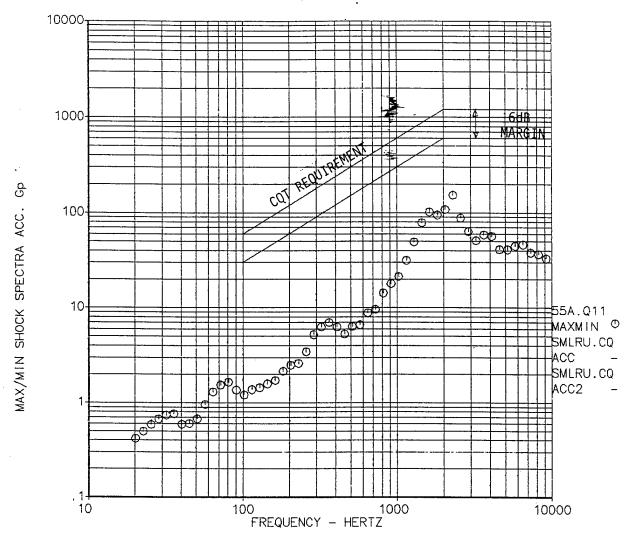


1-JUN-82 10:45:57

RF SWITCH

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 44T
CHECK				environment with component Test Requirement	
APPD.					AGE 198
				THE BUETING CUMPAINT	

FIGURE 2-191 SHOCK SPECTRA (Q = 10) H55A QTV PYROSHOCK TEST 1 PULSE 1

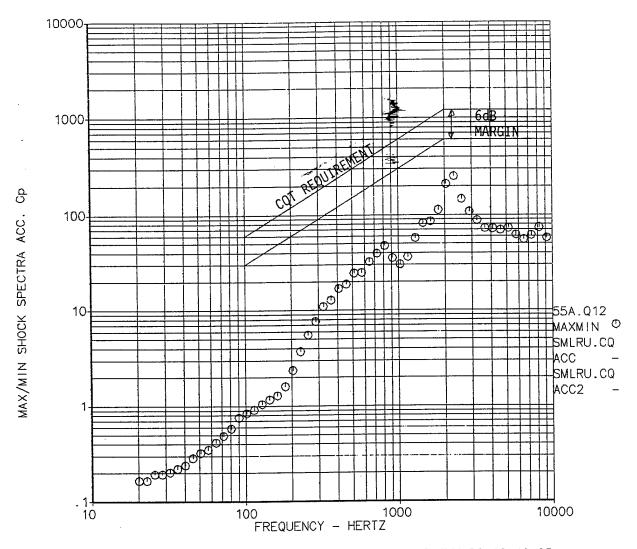


25-JUN-82 12:46:38

CALC	25JUN82	REVISED	DATE	Comparison of component shock	Acc 55A
CHECK				environment with component	
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 199
				HE BOLING COMPANY	
)290-75303-2 Vol. II	

11 1

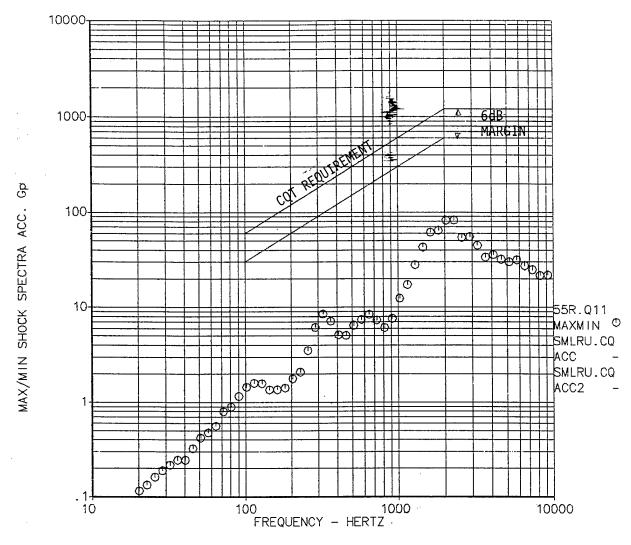
FIGURE 2-192 SHOCK SPECTRA (Q = 10) H55A QTV PYROSHOCK TEST 1 PULSE 2



25-JUN-82 12:49:05

CALC	25JUN82	REVISED	DATE	Comparison of component shock	ACC 55A
CHECK				environment with component	
APPD.		•		Test Requirement	300
APPD.				THE BOEING COMPANY	PAGE 200
<u> </u>				0290-75303-2 Vol. II	

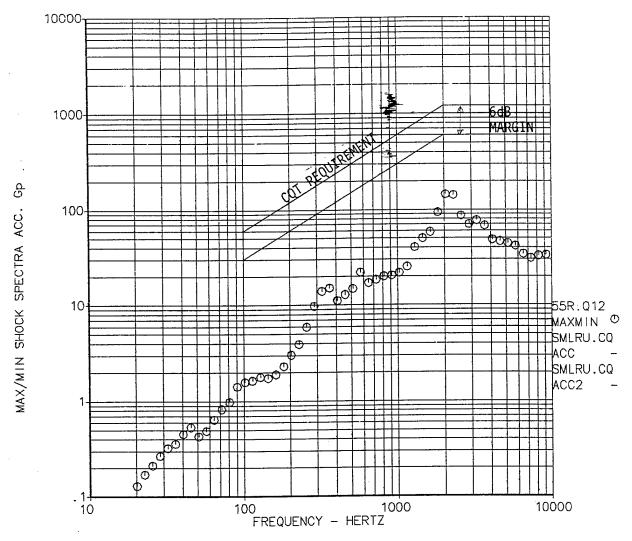
FIGURE 2-193 SHOCK SPECTRA (Q = 10) H55R QTV PYROSHOCK TEST 1 PULSE 1



25-JUN-82 12:51:19

25JUN82	REVISED	DATE	Comparison of component shock	Acc 55R
	:		environment with component	
			Test Requirement	
			THE DOEING COMDANY	PAGE 201
			I THE DUETING CUMPAINT	201
			D290-75303-2 Vol. II	,
	25JUN82	25JUN82 REVISED		25JUN82 REVISED DATE Comparison of component shock environment with component Test Requirement THE BOEING COMPANY D290-75303-2 Vol. II

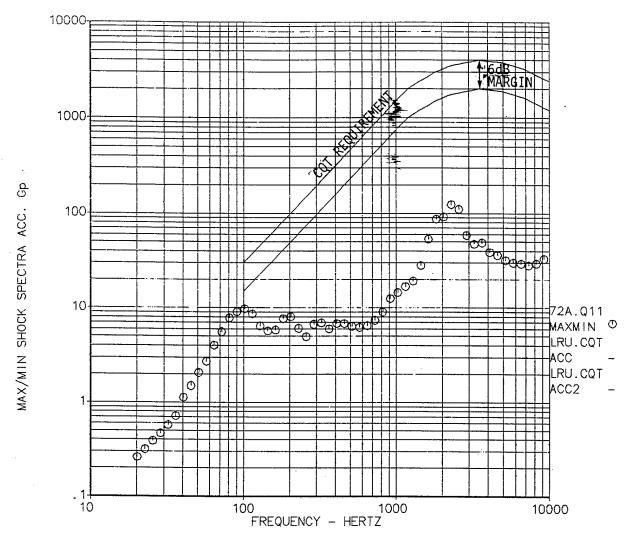
FIGURE 2-194 SHOCK SPECTRA (Q = 10) H55R OTV PYROSHOCK TEST 1 PULSE 2



25-JUN-82 12:53:12

CALC	25JUN82	REVISED	DATE .	Comparison of component shock	Acc 55R
CHECK			ļ	environment with component Test Requirement	-
APPD.				THE DOELLING CONDING	PAGE 202
-				THE BULING COMPANY	. 202

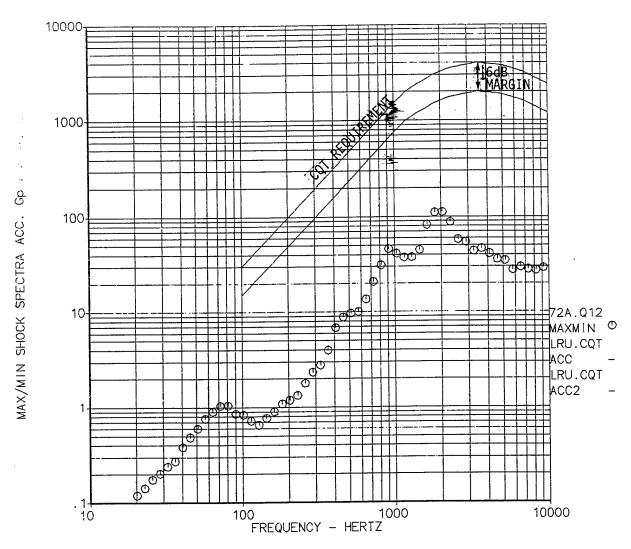
FIGURE 2-195 SHOCK SPECTRA (Q = 10) H72A QTV PYROSHOCK TEST 1 PULSE 1



1-JUN-82 08:18:03

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72A
CHECK			1	environment with component	ACC 7ZA
APPD.				Test Requirement	J
APPD.				THE DOCINO CONDANY -	PAGE 203
				THE BOEING COMPANY	
				D290-75303-2 Vol. II	

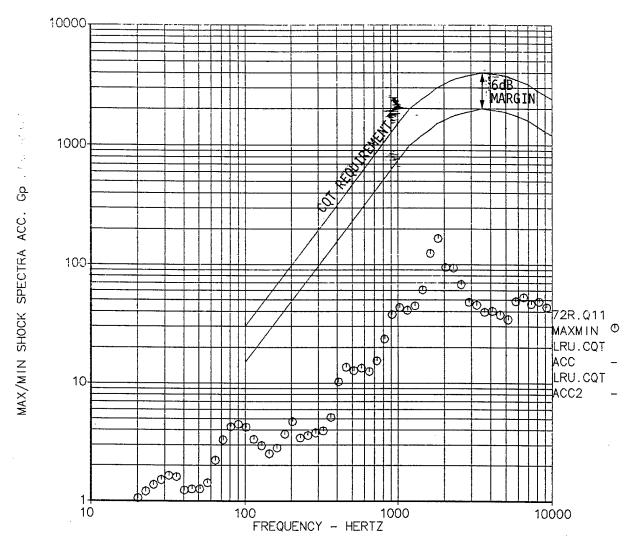
FIGURE 2-196 SHOCK SPECTRA (Q = 10) H72A QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 08:21:27

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component environment with compone Test Requirement	shock nt	Acc 72A
APPD.				THE BOEING COMPAN	Y	PAGE 204
				D290-75303-2 Vol. II	Terri.	

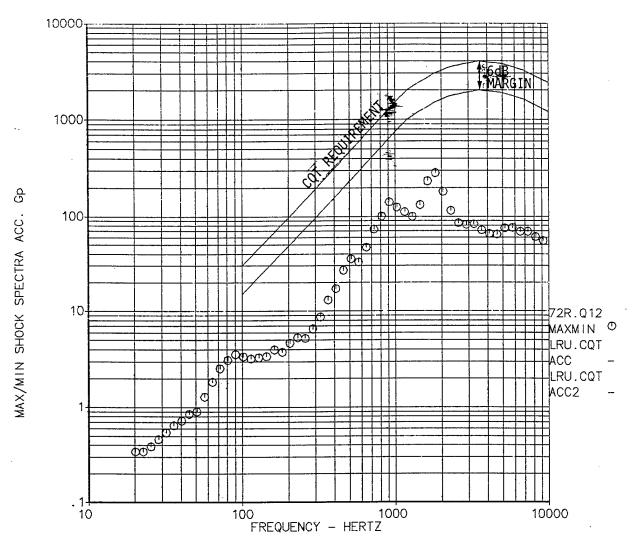
FIGURE 2-197 SHOCK SPECTRA (Q = 10) H72R QTV PYROSHOCK TEST 1 PULSE 1



1-JUN-82 08:25:30

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc. 72D
CHECK				environment with component	Acc 72R
APPD.			1	Test Requirement	ļ
APPD.				THE DOEING COMPANY	PAGE 205
				HE BOEING COMPANY	200
		*		D290-75303-2 Vol. H	

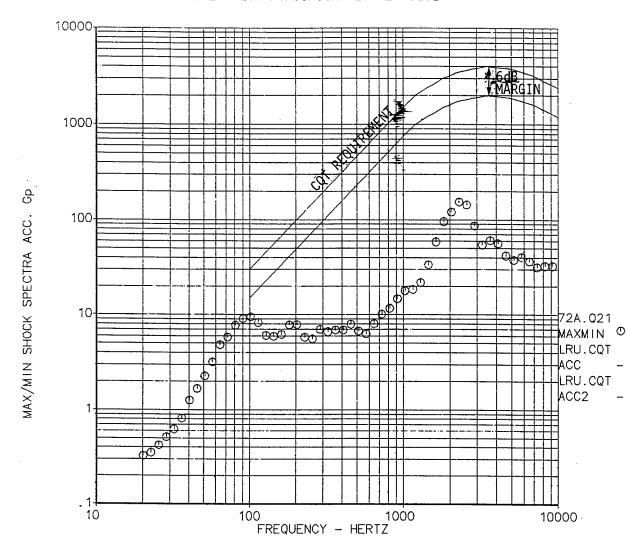
FIGURE 2-198
SHOCK SPECTRA (Q = 10)
H72R QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 08:26:58

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72R
CHECK				environment with component	
APPD.	1	1		environment with component Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 206.
				THE DULTING COMPANT	
				1290=75303-2 Vol II	

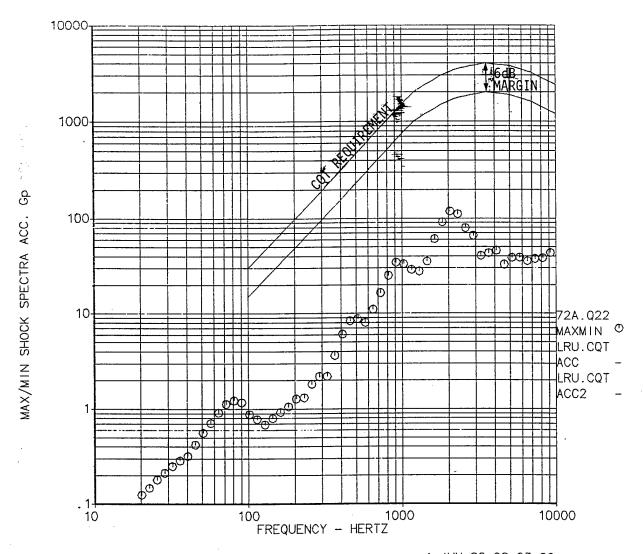
FIGURE 2-199
SHOCK SPECTRA (Q = 10)
H72A QTV PYROSHOCK TEST 2 PULSE 1



1-JUN-82 08:22:19

CALC	1JUN82	REV1SED	DATE	Comparison of component shock	Acc 72A
CHECK				environment with component	ACC 7ZA
APPD.		40.1		Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 207.
				THE DUETING COMPAINT	
		-		D290-75303-2 Vol. II	57

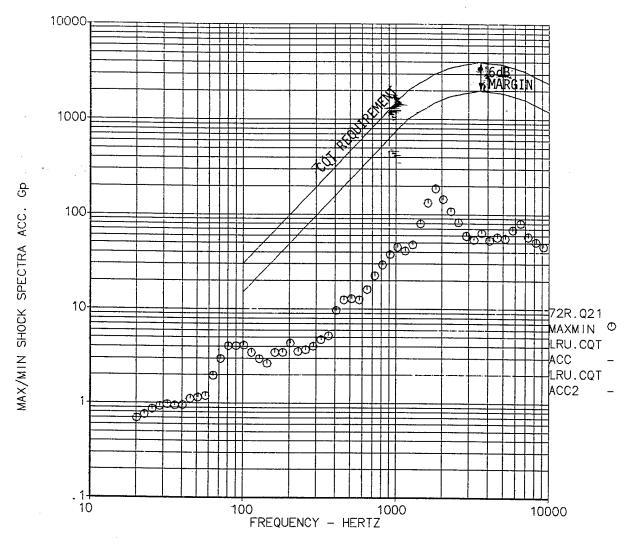
FIGURE 2-200 SHOCK SPECTRA (Q = 10) H72A QTV PYROSHOCK TEST 2 PULSE 2



1-JUN-82 08:23:00

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72A			
CHECK				environment with component				
APPD.				Test Requirement				
APPD.				THE ROFING COMPANY	PAGE 208			
		1		THE BUETING COMPANY	- 4-3 - 6-			
D290+75303-2 Vol. II								

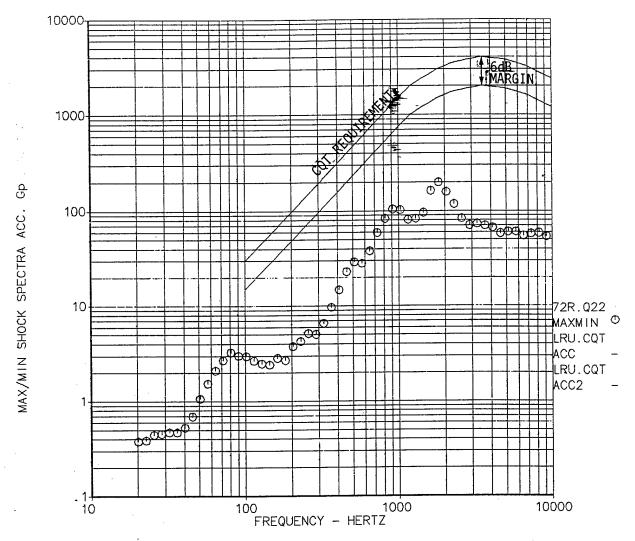
FIGURE 2-201 SHOCK SPECTRA (Q = 10) H72R QTV PYROSHOCK TEST 2 PULSE 1



1-JUN-82 08:28:18

CALC	1JUN82	REVISED	DATE	Comparison of component shock	A 700
CHECK				environment with commonent	Acc 72R
APPD.				environment with component Test Requirement	1
APPD.		-	-	THE DOCLUM COMPANY	PAGE 209
				THE BOEING COMPANY	FRUC ZUS

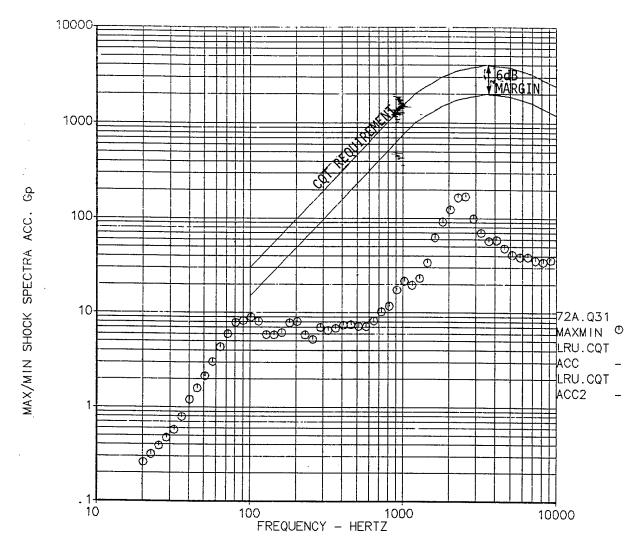
FIGURE 2-202 SHOCK SPECTRA (Q = 10) H72R QTV PYROSHOCK TEST 2 PULSE 2



1-JUN-82 08:29:35

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72R
CHECK		<u> </u>		environment with component	
APPD.				Test Réquirement	
APPD.				THE ROFING COMPANY	PAGE 210
][THE DOLLING COMMITMENT	4 * 1
1.				D290-75303-2 Vol. II	S .,

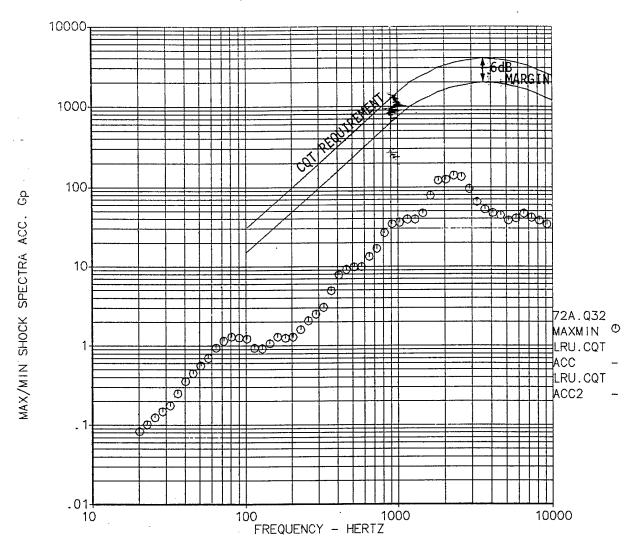
FIGURE 2-203
SHOCK SPECTRA (Q = 10)
H72A QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 08:23:58

_C	1JUN82	REVISED	DATE	Comparison of component shock	A 70A
CK				environment with component	Acc 72A
D.				environment with component Test Requirement	
D.				THE DOE ING COMPANY	PAGE 211
				THE DOLING COMPAINT	
				D290-75303-2 VOI. II	

FIGURE 2-204 SHOCK SPECTRA (Q = 10) H72A QTV PYROSHOCK TEST 3 PULSE 2

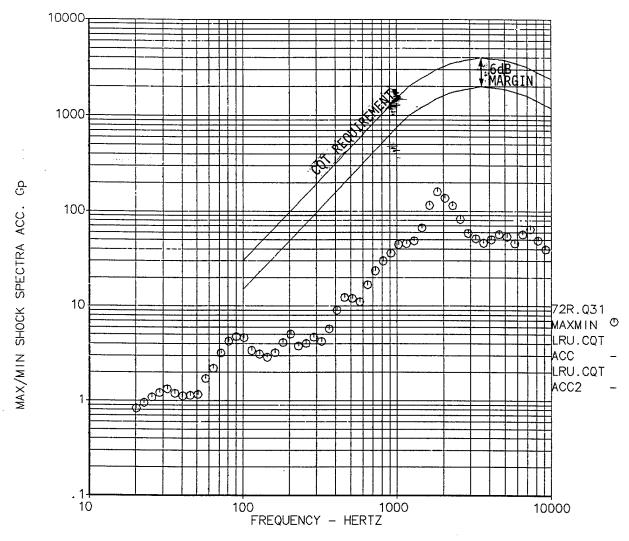


1-JUN-82 08:24:49

DC/DC CONVERTER

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72A
CHECK APPD	-			environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 212

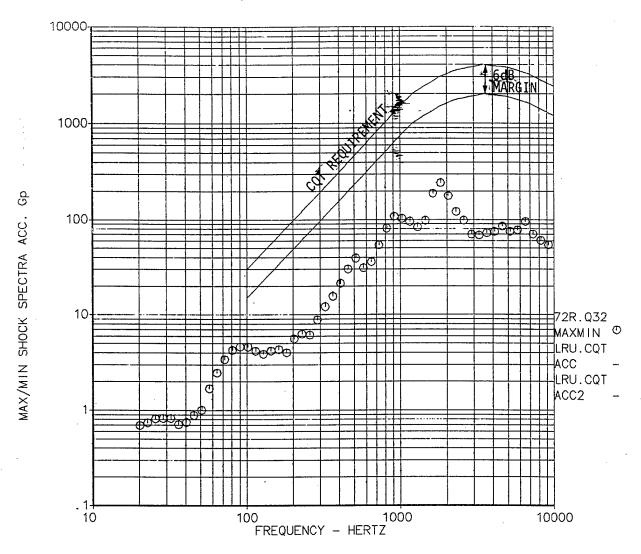
FIGURE 2-205 SHOCK SPECTRA (Q = 10) H72R QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 08:31:27

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72R
CHECK	1 1	1	ļ	environment with component	ACC / LIX
APPD.				Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 213
				THE DUETING COMPAINT	
				D290-75303-2 Vol. II	

FIGURE 2-206 SHOCK SPECTRA (Q = 10) H72R QTV PYROSHOCK TEST 3 PULSE 2

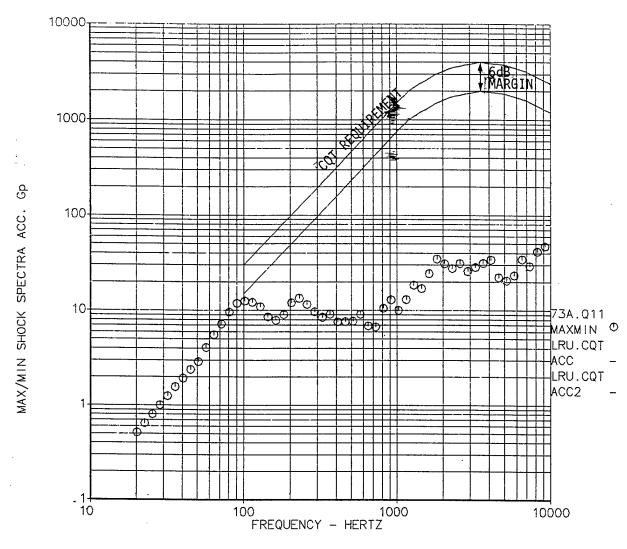


1-JUN-82 08:32:40

DC/DC CONVERTER

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 72R
CHECK				environment with component	7.00 721
APPD.				Test Requirement	
APPD.				THE BOFING COMPANY	PAGE 214
				THE DOLING COMEANT	•

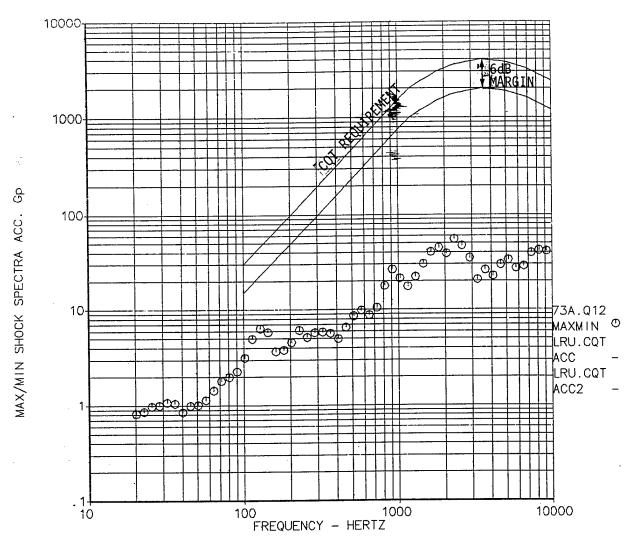
FIGURE 2-207 SHOCK SPECTRA (Q = 10) H73A QTV PYROSHOCK TEST 1 PULSE 1



1-JUN-82 08:33:38

CALC CHECK	1JUN82	REVISED	DATE	Comparison of component shock environment with component	Acc 73A
APPD.				Test Requirement	
APPD.		<u> </u>		THE BOEING COMPANY	PAGE 215
				0290-7 5 303-2 Vol. II	

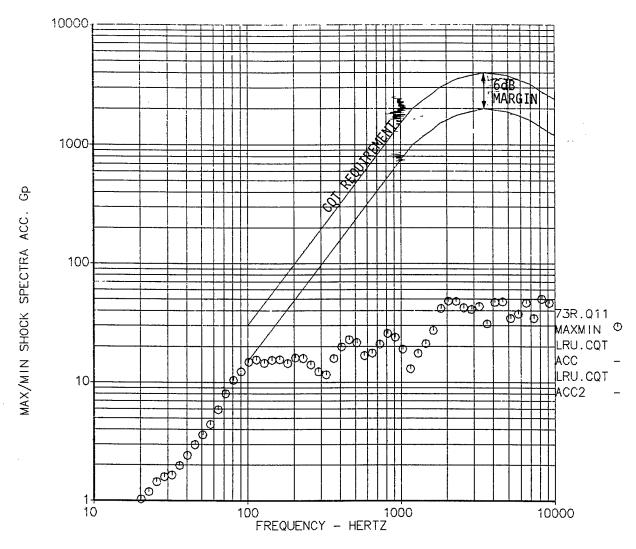
FIGURE 2-208
SHOCK SPECTRA (Q = 10)
H73A QTV PYROSHOCK TEST 1 PULSE 2



1-JUN-82 08:35:06

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 73A
APPD.				THE BOEING COMPANY	PAGE 216
		I		D290-75303-2 Vol. II	

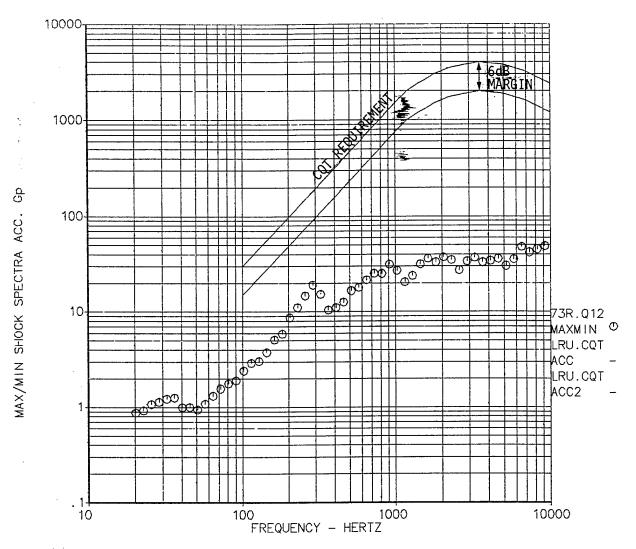
FIGURE 2-209
SHOCK SPECTRA (Q = 10)
H73R QTV PYROSHOCK TEST 1 PULSE 1



1-JUN-82 08:38:57

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 73R
APPD.		 		environment with component Test Requirement	
APPD.				THE BOEING COMPANY	PAGE 217
,		4		D290-75303-2 Vol. II	

FIGURE 2-210 SHOCK SPECTRA (Q = 10) H73R QTV PYROSHOCK TEST 1 PULSE 2



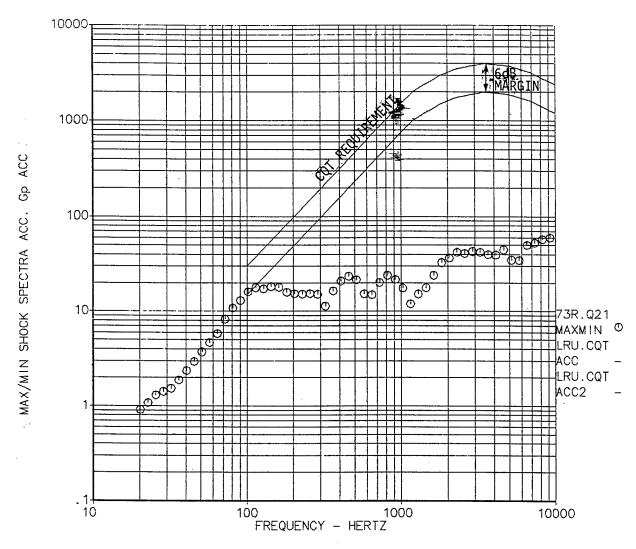
1-JUN-82 08:40:43

POWER AMP A.

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 73R
CHECK APPD.			-	environment with component Test Requirement	
APPD.			ļ	THE BOEING COMPANY	PAGE 218
				I TE DUETING CUMPAINT	

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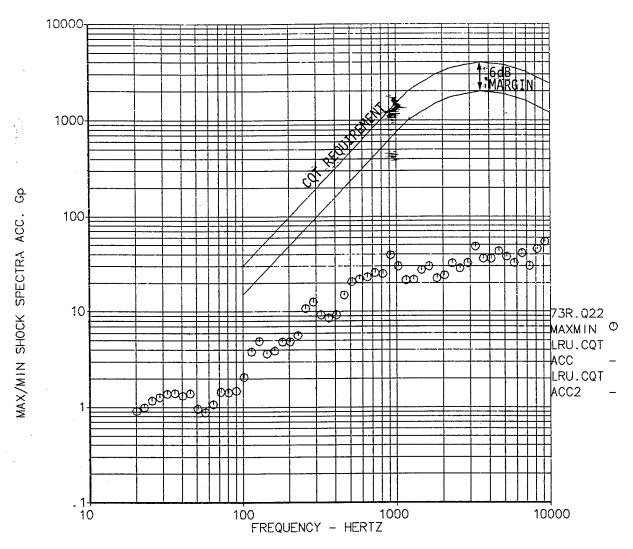
FIGURE 2-211 SHOCK SPECTRA (Q = 10) H73R QTV PYROSHOCK TEST 2 PULSE 1



1-JUN-82 08:43:32

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 73R
APPD.				THE BOEING COMPANY	PAGE 219
				0290-75303-2 Vol. II	

FIGURE 2-212 SHOCK SPECTRA (Q = 10) H73R QTV PYROSHOCK TEST 2 PULSE 2



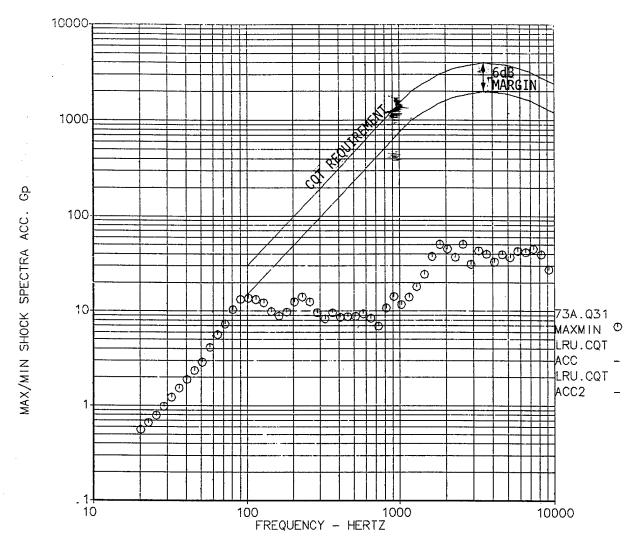
1-JUN-82 08:46:09

POWER AMP A

CALC CHECK APPD.	1JUN82	REVISED	DATE	Comparison of component shock environment with component Test Requirement	Acc 73R
APPD.					PAGE 220

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FIGURE 2-213
SHOCK SPECTRA (Q = 10)
H73A QTV PYROSHOCK TEST 3 PULSE 1

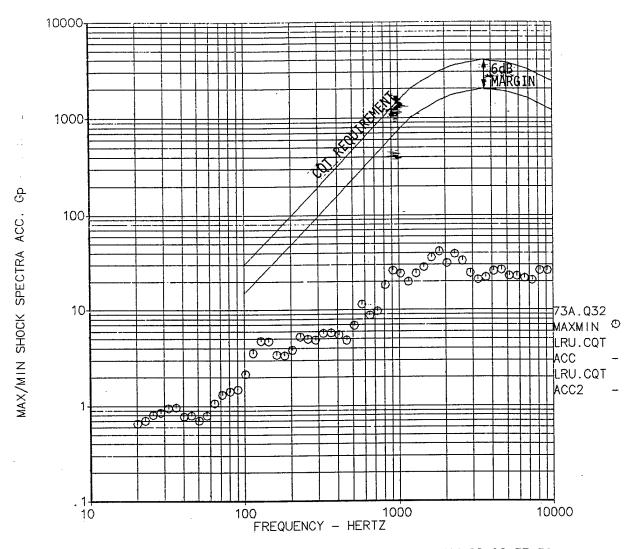


1-JUN-82 08:36:24

POWER AMP A

CALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 73A
CHECK				environment with component	ACC / JA
APPD.				Test Requirement	İ
APPD.				THE DOEING COMPANY	PAGE 221.
				THE BOLING COMPANY	
				D290-75303-2 Vol. II	

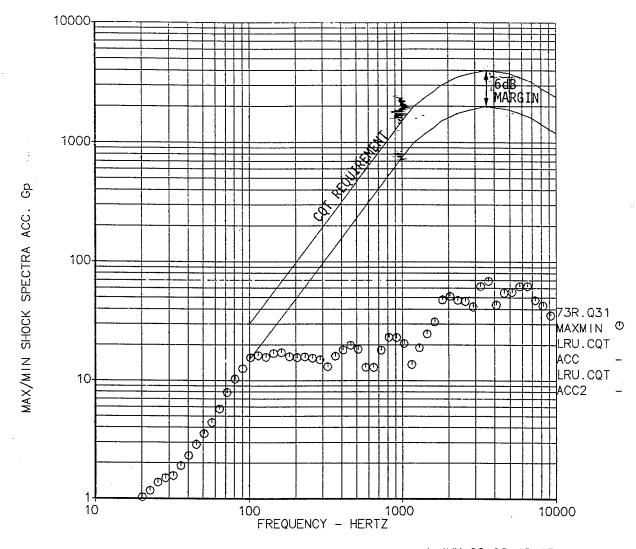
FIGURE 2-214 SHOCK SPECTRA (Q = 10) H73A QTV PYROSHOCK TEST 3 PULSE 2



1-JUN-82 08:37:36

CALC	1JUN82	REVISED	DATE	Comparison of component shock Acc 73A
CHECK				environment with component
APPD.		<u> </u>		Test Requirement
APPD.				THE ROFING COMPANY PAGE 222
				THE BOETTO GOMETHAT SEE
				0290-75303-2 Vol. II

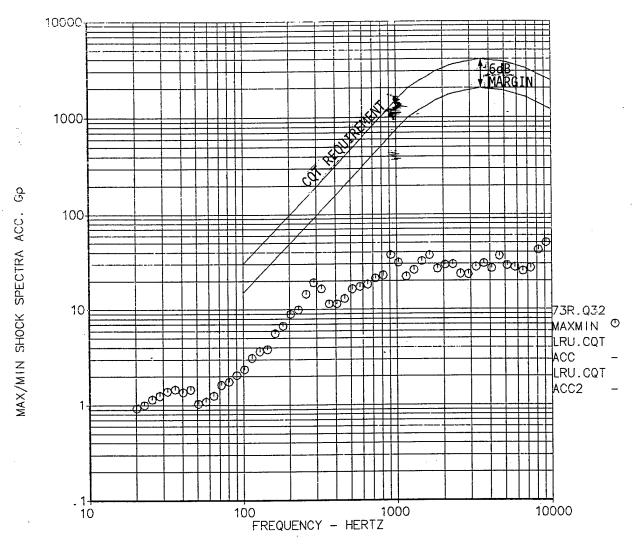
FIGURE 2-215 SHOCK SPECTRA (Q = 10) H73R QTV PYROSHOCK TEST 3 PULSE 1



1-JUN-82 08:48:43

CALC	1JUN82	REVISED	DATE	Comparison of component shoc	k	Acc 73R
CHECK				environment with component		ACC 73K
APPD.				Test Requirement		
APPD.				THE DOCING COMPANY		PAGE 223
				<u>THE BOEING COMPANY</u>	**	
			*	D290-75303-2 Vol. II		

FIGURE 2-216 SHOCK SPECTRA (Q = 10) H73R QTV PYROSHOCK TEST 3 PULSE 2



1-JUN-82 08:51:18

POWER AMP A

GALC	1JUN82	REVISED	DATE	Comparison of component shock	Acc 73R
CHECK APPD.				environment with component Test Requirement	
APPD.				THE BOEING COMPANY AND	PAGE 224

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THE BUEING COMPANY

ACTIVE SHEET RECORD													
		ADD)ED	SHEETS				ADE	DED	SHEETS			
SHEET NO.	REV LTR	SHEET NO.	REV LTR	sheet No.	REV LTR	SHEET NO.	REV LTR	SHEET NO.	REV LTR	SHEET NO.	REV LTR		
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	A A A A	4.1				32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62							

THE BUEING COMPANY

				ACTIVE S	SHE	ET RECORD)				
		ADD	ED	SHEETS				ADE	DED	SHEETS	
SHEET NO.	REV LTR	SHEET NO.	REV LTR	SHEET NO.	REV LTR	sheet No.	REV LTR	SHEET NO.	REV LTR	SHEET NO.	REV LTR
63						94					
64						95					
65						96					
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67						98					
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THE **BOEING** COMPANY

ACTIVE SHEET RECORD											
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THE BOEING COMPANY

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	REVISIONS		
LTR	DESCRIPTION	DATE	APPROVAL
А	Revised to remove references to a 2 volume document. A third volume was added to include shock test and analysis results.		C.J. Beck C.J. Beck Ahudwell 3, H.L. Nordwal 14
	IUS Document Release/DQA/02APR93/G.E. Parker	930405	A.D. Watson A.D. Watson A.D. Watson A.D. Watson A.D. Watson A.D. Watson A.D. Watson
			D. Stevenson

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